

VinylPlus Executive Summary 2012

Reporting on the activities of the year 2011



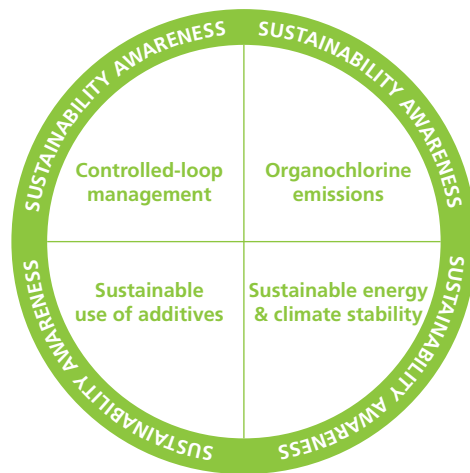
www.vinylplus.eu

The VinylPlus Voluntary Commitment

VinylPlus is the new ten-year Voluntary Commitment of the European PVC industry. Building upon the achievements of the Vinyl 2010 programme, it takes the next important steps in tackling the sustainability challenges for PVC and in establishing a long-term framework for the on-going sustainable development of the PVC value chain. The geographical scope of the programme extends to the EU-27 plus Norway and Switzerland.

In developing the new VinylPlus programme, the industry has chosen to work in an open process of extensive stakeholder dialogue, including different industry sectors, NGOs, regulators, civil-society representatives and end-users. Consistent with the commitment of the European PVC industry, five key challenges need to be overcome to secure a sustainable future for PVC, in line with the move towards a more sustainable society.

The first four challenges within the VinylPlus programme deal with the production and use of PVC along the value chain, whilst the fifth challenge addresses the need to increase awareness about sustainability and to create a dialogue with all stakeholders. Each of the challenges is based on the TNS (The Natural Step www.naturalstep.org) System Conditions for a Sustainable Society.



Expenditure by VinylPlus for 2011, including EuPC and its members, amounted to €8.28 million.

Challenge

1

Controlled-loop Management:

We will work towards the more efficient use and control of PVC throughout its life cycle.

Recycling Target

257,084 tonnes of post-consumer PVC waste was recycled in 2011. Recovinyl was the main contributor, with a registered recycled volume of 253,086 tonnes of post-consumer PVC waste.

Innovative Recycling

■ Vinyloop®

Vinyloop® is a recycling technology based on a physical process involving solvents producing high quality R-PVC (Recycled PVC) compounds and allows for PVC to be separated from other materials. The latest innovations implemented at the plant have resulted in the production of consistent quality, high-level purity R-PVC.

Legacy Additives

The 'legacy additives' issue (substances which use in PVC products has been discontinued but which are contained in recycled PVC) may negatively affect the use of PVC recyclates. VinylPlus will help regulators to assess the barriers caused for recycling efforts, if further restrictions were to be applied to such substances.

■ Low Molecular Weight Phthalates

In summer 2011, Denmark proposed a restriction on the commercialisation of articles containing DEHP, BBP, DBP and DIBP in indoor air and skin contact applications. The EU launched a public consultation, open until 16 March 2012.

A study is being undertaken by VinylPlus to assess the suitable use of PVC recyclates containing DEHP (and to a lesser extent BBP, DBP and DIBP) from a human health risk perspective.

■ Lead

In December 2010, the Norwegian Climate and Pollution Agency announced a proposal to ban the use of consumer products containing lead, lead compounds, medium-chain chlorinated paraffins (MCCPs), pentachlorophenol (PCP) and perfluorooctanoic acid (PFOA).

In September 2011, VinylPlus decided to launch a tender for a study on lead in PVC recyclates, similar to the study on cadmium carried out by the VITO institute.

■ **SDS-R Project**

To support recyclers in their compliance with the REACH Regulation requirements, EuPC and EuPR have developed an online database of polymers and applications where recyclers can enter basic information (statistical or analytical) to obtain the specific required Safety Data Sheets for Recyclates (SDS-R).

Controlled-loop Committee

The Controlled-loop Committee includes representatives of PVC resin and additives producers, converters, and Recovinyl. In 2011, the Committee helped to determine VinylPlus' recycling targets and agreed on the definition of 'recycled PVC' as "a discarded PVC product or semi-finished product that is diverted from waste for use within a new product. Processing waste is included, provided it cannot be re-used in the same process that generated the waste".

Challenge 2

Organochlorine Emissions: *We will help to ensure that persistent organic compounds do not accumulate in nature and that other emissions are reduced.*

Organochlorines

The European PVC industry has committed to addressing the concerns on organochlorines expressed by stakeholders. In line with this objective, a specific workshop with external stakeholders is planned for 2012.

PVC Resin Industry Production Charters

PVC resin manufacturers have signed Industry Charters for the production of PVC by the suspension (VCM & S-PVC Charter) and emulsion (E-PVC Charter) processes, aimed at reducing their environmental impact and improving eco-efficiency in the production phase. A new verification took

place based on the performance during the second half of 2011 and the results will be available by the time the Progress Report is published and posted on the VinylPlus website.

Safe Transport

With reference to the target of zero-accident rate with VCM release during transportation, no such accidents occurred in 2011.

Challenge 3

Sustainable Additives: *We will review the use of PVC additives and move towards more sustainable additive systems.*



WallGreen, a vertical garden made from recycled PVC banners

'Sustainable Use of Additives' Criteria

A dedicated Task Force on additives was set up at the beginning of 2011. A set of basic criteria for the evaluation of a 'sustainable use of additives' has been developed and included as part of the VinylPlus Voluntary Commitment. The challenge for 2012 is to further develop these criteria, making them measurable and transparent.

Lead Replacement

ESPA and EuPC are committed to replacing lead stabilisers completely by 2015 across the EU-27. In the 2007-2011 period, lead stabiliser consumption decreased by 71,396 tonnes (-71.4%).

Plasticisers

The 2011 data on consumption of plasticisers in Europe confirm the progressive shift from classified Low (DEHP, BBP, DBP, DIBP) to non-classified High (DINP, DIDP, DPHP) Molecular Weight phthalates and – to a smaller extent – to some non-phthalate plasticisers. Studies and research on phthalates are ongoing.

Challenge 4

Sustainable Energy Use: *We will help to minimise climate impacts through reducing energy and raw material use, potentially endeavouring to switch to renewable sources and promoting sustainable innovation.*



PVC windows contribute to saving resources and energy

In relation to the commitment to assessing the available environmental/sustainability footprints and recommending a suitable footprint measurement by the end of 2014, VinylPlus has established an ad hoc Working Group.

Renewable Raw Materials

The Renewable Materials Task Force was established in December 2011, ahead of the target deadline. The main objective of this Task Force is to investigate how to possibly increase the use of renewable raw materials, if they are sustainable, across the PVC value chain.

Energy Efficiency

In October 2011, VinylPlus established the Energy Efficiency Task Force and decided to organise its work by industry sectors to better analyse the specific energy consumption and define ad hoc reduction targets.

With regards to the PVC resin producers' commitment to reducing their specific energy consumption, targeting 20% by 2020, the first ECVM Energy Efficiency Task Force meeting was held in October 2011.

Challenge 5

Sustainability Awareness: *We will continue to build sustainability awareness across the value chain – including stakeholders inside and outside the industry – to accelerate resolving our sustainability challenges.*

Independent Monitoring

VinylPlus continues the best practice established by Vinyl 2010 and maintains an independent and critical Monitoring Committee, with the majority of members being external stakeholders.

Annual Reporting

A verified and audited Progress Report summarising the developments made towards achieving the targets set in the VinylPlus Voluntary Commitment will be published every year.

For 2011, the content of the Progress Report has been independently verified by SGS, whilst tonnages of post-consumer PVC waste recycled and expenditure have been audited and certified by KPMG. The Natural Step has made a commentary on overall progress of work on the VinylPlus sustainability challenges.

External Stakeholder Dialogue and Communication

VinylPlus continued its efforts for transparent and open communication with all of its stakeholders.

In 2011, VinylPlus was introduced and presented through active participation in high level conferences, events and exhibitions. Furthermore VinylPlus' approach and its working principles were presented during an interactive workshop at the UN CSD-19 Partnership Fair in New York in May 2011.

Visible Membership and Product Participation

The Label and Certification Task Force was set up in January 2011 with the objective of defining the criteria attached to the membership certificate and to recommend an approach for the implementation of a product label.

Distribution of the 'Official Partner Certificate' began in July 2011. It is released on a yearly basis to the companies that are committed to supporting the VinylPlus work on each of the five challenges and financially contribute to the implementation of the programme. A potential labelling scheme for PVC products is under development and will be launched by the end of 2012.

VinylPlus Partners

In 2011, contributors were:

A. Kolckmann GmbH (Germany)
Akzo Nobel Nippon Paint AB (Sweden)
Alfathern Spa (Italy)*
Aliaxis Services (Belgium)
Alkor Folien GmbH (Germany)
Alkor Kunststoffe GmbH (Germany)
AMS Kunststofftechnik GmbH (Germany)
Aluplast Austria GmbH (Austria)
Amtico International (UK)
Armstrong DLW AG (Germany)
BM SLU (Spain)
Baquelite Liz SA (Portugal)
Bilcare Research GmbH (Germany)
BT-Bau Technik GmbH (Germany)
BTH Fitting Kft (Hungary)
CIFRA (France)
CTS-Cousin-Tessier SAS (France)
CTS-TCT Polska Sp. z o.o. (Poland)
CTW (Germany)
Commerciale Emiliana (Italy)
Debolon Dessauer Boden (Germany)
Deceuninck NV (Belgium)
Deceuninck (France)
Deceuninck (Poland)
Deceuninck (UK)
Dietzel GmbH (Austria)
Dyka BV (Netherlands)
Dyka Plastics NV (Belgium)
Dyla Polska Sp. z o.o. (Poland)
Ergis-Eurofilms SA (Poland)
Eurocell Profiles Ltd (UK)
Eurplast (Italy)
Finstral AG (Italy)
FIP (Italy)
Flag Spa (Italy)
Floridienne Chemie SA (Belgium)
Forbo AB (Sweden)
Forbo Château-Renault SAS (France)
Forbo Flooring NV (Netherlands)
Forbo-Giubiasco SA (Switzerland)
Forbo Reims (France)
Forbo Flooring Coral (UK)
Forbo Flooring UK Ltd (UK)
Forbo-Novilon BV (Netherlands)
Frans Bonhomme (France)*
Gallazzi Spa (Italy)*
Gealan Fenster-Systeme GmbH (Germany)
Georg Fischer Deka GmbH (Germany)
Gerflor Mipolam GmbH (Germany)
Gerflor SAS (France)
Gerflor Tarare (France)
Gernord Ltd (Ireland)

Giropi (France)
Hepworth Build. Prod. Ltd (UK)
Heubach GmbH (Germany)
Heytex Bramsche GmbH (Germany)
Heytex Neugersdorf GmbH (Germany)
Hunter (UK)
Industrias Rehaus SA (Spain)
John GmbH (Germany)
Juteks D.D. (Slovenia)
KWH Pipe Oy AB (Finland)
Karl Schoengen KG (Germany)
Klöckner Pentaplast GmbH & Co. KG (Germany)
Konrad Hornschuch AG (Germany)
Marley Deutschland (Germany)
Marley Hungaria (Hungary)
Marley P&D (UK)
Mehler Technologies GmbH (Germany)
MKF-Ergis Sp. z o.o. (Poland)
MKF-Folien GmbH (Germany)
Mondoplastico Spa (Italy)*
MWK-Kunststoffverarbeitungen GmbH (Germany)
Nicoll (France)
Nitta Corp. Of Holland BV (Netherlands)
Nordisk Wavin A/S (Denmark)
Norsk Wavin A/S (Norway)
Nyloplast Europe BV (Netherlands)
Pannunio Csomagoalanayag (Hungary)
Perlen Packaging (Switzerland)*
Pipelife Austria (Austria)
Pipelife Belgium NV (Belgium)
Pipelife Czech S.R.O. (Czech Republic)
Pipelife Deutschland GmbH (Germany)
Pipelife Eesti AS (Estonia)
Pipelife Finland Oy (Finland)
Pipelife Hellas SA (Greece)
Pipelife Nederland BV (Netherlands)
Pipelife Polska SA (Poland)
Pipelife Sverige AB (Sweden)
Poliplast (Poland)
Poloplast GmbH & Co. KG (Austria)
Polyflor (UK)
Polymer-Chemie GmbH (Germany)*
Primo Danmark A/S (Denmark)
Profel NV (Belgium)
Profialis NV (Belgium)
Profialis SAS (France)
Profine GmbH (Germany)
Redi (Italy)
Rehaus AG & Co. (Germany)
Rehaus GmbH (Austria)

Rehaus Ltd (UK)
Rehaus SA (France)
Rehaus Sp. Zo.o. (Poland)
Renolit SE (Germany)
Renolit Belgium NV (Belgium)
Renolit Czech S.R.O. (Czech Republic)
Renolit GOR Spa (Italy)
Renolit Hispania SA (Spain)
Renolit Ibérica SA (Spain)
Renolit Milano Srl (Italy)
Renolit Nederland BV (Netherlands)
Renolit Ondex SAS (France)
Renolit Cramlington Ltd (UK)
Riuvvert (Spain)
Roehling Engineering Plastics KG (Germany)
S.I.D.I.A.C. (France)
Sattler (Austria)
Schueco PWS GmbH & Co. (Germany)
Sika-Trocral GmbH (Germany)
Solvay Benvic Italia Spa (Italy)
Solvay Benvic Ibérica (Spain)
Sotra-Sepererf SAS (France)
Stockel GmbH (Germany)
Tarkett AB (Sweden)
Tarkett GDL SA (Luxembourg)
Tarkett GmbH & Co. KG (Germany)
Tarkett Marley Floors Ltd (UK)
Tarkett SAS (France)
Tessenderlo Chemie NV (Belgium)
The Altro Group Pcl (UK)
Tönsmeier GmbH & Co. KG (Germany)*
Upofloor (Finland)
Uponor Suomi Oy (Finland)
Uralita Sistemas de Tuberias SA (Spain)
Veka AG (Germany)
Veka Ibérica (Spain)
Veka Plc (UK)
Veka Polska (Poland)
Veka SAS (France)
Verseidag-Indutex GmbH (Germany)
Vescom BV (Netherlands)
Vulcaxflex Spa (Italy)*
Wavin BV (Netherlands)
Wavin Baltic (Lithuania)
Wavin Belgium BV (Belgium)
Wavin France SAS (France)
Wavin GmbH (Germany)
Wavin Hungary (Hungary)
Wavin Ireland Ltd (Ireland)
Wavin Metalplast (Poland)
Wavin Nederland BV (Netherlands)
Wavin Plastics Ltd (UK)

PVC producers supporting the Voluntary Commitment in 2011

Anwil (Poland)
Arkema (France, Spain)
Borsodchem (Hungary)
Ercros (Spain)
Ineos Vinyls (Belgium, France, Germany, UK, Netherlands, Norway, Sweden)
Oltchim (Romania)
Novacke Chemické Zavody (Slovak Republic)
Shin-Etsu PVC (Netherlands, Portugal)
SolVin (Belgium, France, Germany, Spain)
Spolana A.S. (Czech Republic)
Vestolit GmbH & Co. KG (Germany)
Vinolint GmbH & Co. KG (Germany, UK)

Stabilisers producers supporting the Voluntary Commitment in 2011

Akdeniz Kimya (Turkey)
Akros Chemicals (UK)
Asua (Spain)
Arkema (France)
Baerlocher (Germany)
Chemson Polymers-Additives AG (Austria)
Floridienne Chimie (Belgium)
Galata Chemicals (Germany)
Lamberti (Italy)
Reagens (Italy)
The Dow Chemical Company (Switzerland)

Plasticisers producers supporting the Voluntary Commitment in 2011

BASF SE
Evonik Oxeno GmbH (Germany)
ExxonMobil Chemical Europe Inc.
Perstorp Oxo AB (Sweden)

*Companies that joined VinylPlus in 2011, not having been partner of Vinyl 2010 the previous year