

The Voluntary Commitment of the European PVC industry

22 June 2011

Content

Executive Summary	4
1. Introduction	6
2. The VinylPlus® Commitment	8
3. The VinylPlus® Working Principles	9
4. The Five VinylPlus® Challenges	10
4.1. Challenge One: Controlled-Loop Management of PVC	10
4.2. Challenge Two: Organochlorine Emissions	11
4.3. Challenge Three: Sustainable Use of Additives	13
4.4. Challenge Four: Sustainable Energy & Climate Stability	14
4.5. Challenge Five: Sustainability Awareness	15
5. Summary of VinylPlus® Planned Milestones	18
6. Review of Targets	19
7. VinylPlus® Voluntary Commitment Signatories	20
Appendix	22
Member Organisations' Contact Details	22
The Natural Step System Conditions for a Sustainable Society	25



EXECUTIVE SUMMARY

VinylPlus® is the new ten-year Voluntary Commitment of the European PVC industry. It is built on the achievements of the Vinyl 2010 programme and takes the next important steps in tackling the sustainability challenges for PVC. The regional scope of the programme is the EU-27 plus Norway and Switzerland.

The VinylPlus programme has been developed bottom up in industry workshops and with an open process of stakeholder dialogue. Five key sustainable development challenges have been identified for PVC, together with a set of working principles. The first four challenges are technical in nature whilst the fifth challenge addresses raising awareness and understanding of the importance of sustainable development. Each of the challenges is based on The Natural Step System Conditions for a Sustainable Society.

THE FIVE CHALLENGES & THE RELATED TARGETS

1 Controlled-Loop Management:

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

- Recycle 800,000 tonnes/year of PVC by 2020.
- Exact definitions and reporting concept to be available by end 2011.
- Develop and exploit innovative technology to recycle 100,000 tonnes/year of difficult-to-recycle PVC material (within the overall 800,000 tonnes/year recycling target) by 2020.
- Address the issue of legacy additives and deliver a status report within each annual VinylPlus Progress Report.

2 Organochlorine Emissions:

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

- Engage with external stakeholders in the discussion of the organochlorine emissions during 2012.
- Develop a plan to deal with stakeholder concerns on organochlorine emissions by end 2012.
- Compliance with the PVC resin Industry Charters in first Quarter 2012.
- Risk assessment for the transportation of major raw materials, in particular VCM, by end 2013.
- Target zero-accident rate with VCM release during transportation in the next ten years.

3 Sustainable Additives:

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

- Lead replacement in the EU-27 by end 2015.
- Additives Task Force to work out robust criteria for the 'sustainable use of additives', with status report by end 2012.
- Validation of the robust criteria for the 'sustainable use of additives', in conjunction with the downstream value chain, with status report by end 2014.
- Other PVC additive producers and the downstream value chain will be invited to participate in the 'sustainable additives' initiative.

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.

- Establish Energy Efficiency Task Force by end 2011.
- Resin producers to reduce their specific energy consumption, targeting 20% by 2020.
- Define targets for specific energy reduction for converters by end 2012.
- Energy Efficiency Task Force to recommend suitable environmental footprint measurement by end 2014.
- Establish Renewable Materials Task Force by end first Quarter 2012.
- Renewable Materials Task Force's status report by

5 Sustainability Awareness:

end 2012.

We will continue to build sustainability awareness across the value chain – including

stakeholders inside and outside the industry – to accelerate resolving our sustainability challenges.

- VinylPlus web portal to go online in Summer 2011.
- A VinylPlus Monitoring Committee, which will meet a minimum of twice a year, will be established by end 2011.
- A VinylPlus Membership Certificate will be launched by end 2011.
- A public, and independently audited, VinylPlus Progress Report will be published annually and proactively promoted to key stakeholders. The first edition will be published in 2012.
- Annual external stakeholder meetings will be organised, commencing in 2012.
- A VinylPlus product label will be launched by end 2012.
- ECVM will take an active role in promoting VinylPlus with international PVC industry organisations worldwide.
- ESPA will actively promote VinylPlus sustainability principles to the markets outside the EU-27.
- VinylPlus will increase the number of participants by 20%, compared with 2010 by end 2013.
- VinylPlus will engage with five global brand holders by end 2013.
- A review of progress towards the globalisation of the approach will be undertaken by end 2015.

A formal interim review of all targets is foreseen in 2015.

1. INTRODUCTION

Polyvinyl Chloride (PVC) is one of the world's most important polymers and has evolved since the 1940s to become a universally-used, cost effective, adaptable and safe material. It is a highly efficient converter of raw materials, combining salt and oil to produce a versatile plastic that is specified for a broad range of long and short life applications. At the same time this material has faced a number of concerns about environmental, and some social, impacts over recent years.

The European PVC value chain (PVC manufacturers, additive producers and converters as represented by their European Associations ECVM¹, ECPI², ESPA³, and EuPC⁴) united voluntarily in 2000 to meet the challenge of the sustainable development of their industry. The desire to achieve an integrated approach culminated in the signature of a **'Voluntary Commitment of the PVC Industry'** in March of that year and subsequently in the creation of **Vinyl 2010**.

Over a ten-year period, reporting annually and supervised by an independent Monitoring Committee, the Vinyl 2010 initiative focused the industry on an ambitious programme, and succeeded in meeting its performance targets.

Vinyl 2010 achieved significant progress for the industry in pursuing sustainability. It has also become a reference for other sectors on what may be achieved with voluntary collaboration by an entire value chain in, for example, the setting up of innovative and successful recycling systems.

PVC is already contributing to sustainable development in Europe in many ways. Its outstanding properties and affordability, delivered through the low environmental impact of European resin production and conversion, result in a superior performance with enhanced eco-efficiency. PVC has also proven to be repeatedly recyclable, thus providing the potential for a further important reduction of its environmental footprint.

VinylPlus is a new ten-year Voluntary Commitment which builds on the achievements of the Vinyl 2010 programme, taking the next important steps in tackling the sustainability challenges for PVC and also in establishing a long-term framework for the on-going sustainable development of the PVC value chain. The regional scope of the programme is the EU-27 plus Norway and Switzerland.

In creating the new VinylPlus programme, the industry has chosen to work in an open process of extensive stakeholder dialogue, including the industry, NGOs, regulators, public representatives

¹ The European Council of Vinyl Manufacturers

² The European Council for Plasticisers and Intermediates

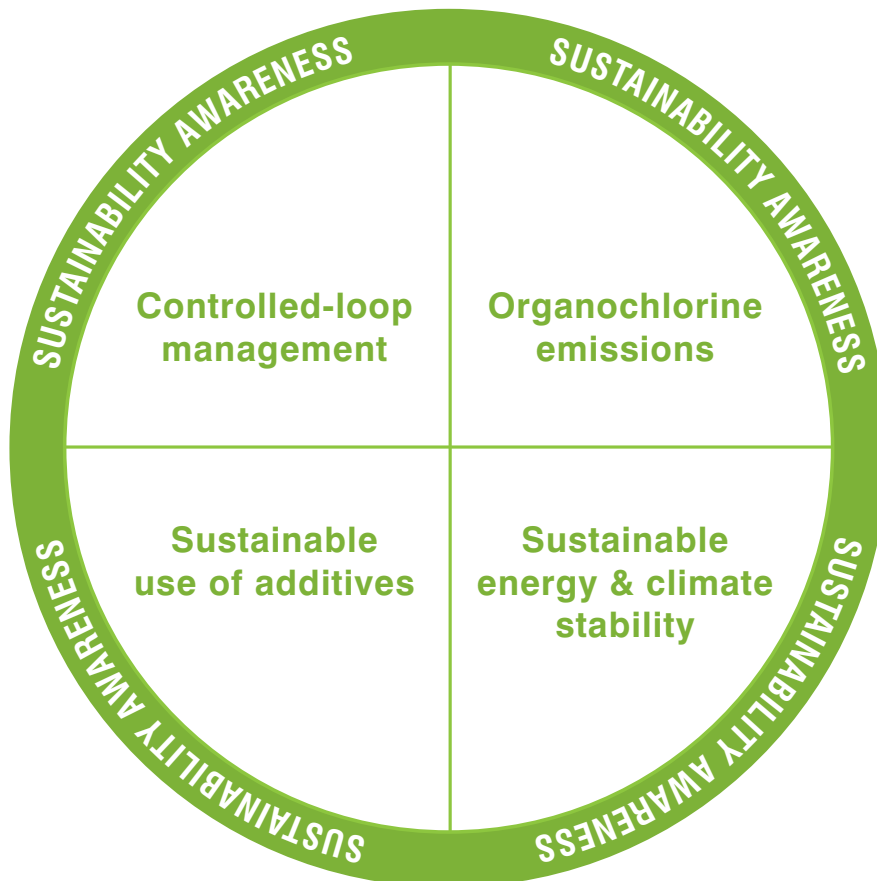
³ The European Stabiliser Producers Association

⁴ The European Plastics Converters

and users of PVC. **Five key challenges have been identified** (based on the Natural Step System Conditions) to enable PVC to take its place in, and contribute to, a more sustainable society.

The first four challenges within the VinylPlus programme are technical in nature, resulting from

a thorough analysis of the production and use of PVC as a material. The fifth challenge addresses the importance of raising awareness about sustainable development, recognising that progress for the industry will be equally dependent upon widening understanding throughout industry, as well as in society generally.



2. THE VINYLPLUS® COMMITMENT

- 1** We will work towards the more efficient use and control of PVC throughout its life cycle.
- 2** We will help to ensure that persistent organic compounds do not accumulate in nature and that other emissions are reduced.
- 3** We will review the use of PVC additives and move towards more sustainable additives systems.
- 4** 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.
- 5** We will continue to build sustainability awareness across the value chain – including stakeholders inside and outside the industry – to accelerate resolving our sustainability challenges.



3. THE VINYLPLUS® WORKING PRINCIPLES

VinylPlus® is committed to the following guiding principles:

- **Voluntary action**
getting on with tackling the sustainability challenges of PVC in a proactive way.
- **Measurable targets and deadlines**
- **Continuous improvement**
to always accept that the journey to sustainability requires constant evaluation and learning along the way.
- **Collaboration**
ways of working together within the industry to find solutions that no single player can implement, and reaching out to a much broader stakeholder group.
- **Transparency**
opening-up, sharing and recognising the gap between where we are now and where we aim to be.
- **Scientific rigour and research**
making sure technologies, processes and materials are assessed according to strong and scientifically-based sustainability principles.
- **Dialogue**
creating more debate with external contacts and those who have something to say about PVC, in a positive, listening and learning frame of mind.
- **Responsibility**
no one is going to secure a place for PVC in the sustainable future other than the industry itself.
- **Seeking business prosperity**
we need successful businesses along the value chain of PVC – that means making an acceptable return on investment, and being competitive; at the same time as seeking the route to sustainable development.
- **Priority to sustainability innovation**
research, design and innovation should have no goal other than improving the sustainability potential of PVC including its market competitiveness, as well as openly challenging components, materials and practices that do not make sense in terms of sustainable development.

4. THE FIVE VINYLPLUS® CHALLENGES

4.1. Challenge One: Controlled-Loop Management of PVC

The VinylPlus members commit to work towards more and more **controlled-loop management of PVC**. This includes efficient use and control of PVC and additives throughout their life cycle.

One of the key achievements of Vinyl 2010 was to stimulate recycling and organise an audited system for more than 260,000 tonnes/year of PVC recycling in Europe by the end of 2010 (an increase of more than 200,000 tonnes compared to the year 2000).

VinylPlus Recycling Target

VinylPlus targets to recycle 800,000 tonnes/year of PVC by 2020.

VinylPlus will cover all PVC waste streams, whether regulated or not.

The VinylPlus recycling programme will include:

- Discarded PVC products or semi-finished products that are being diverted from waste for use within a new product.
- Processing waste, provided that it cannot be re-used in the same process that generated the waste.
- Exports of PVC waste outside the EU-27 going to reliable and audited business partners, who can demonstrate that this material is being responsibly recycled.

VinylPlus commits not only to support the collection of PVC for recycling, but also to facilitate and help in **the development of the markets required to absorb the recycled PVC material**. This will particularly require the involvement of the conversion industry and other downstream market

partners, the development of the necessary business platforms and support for innovative recycling solutions.

The 'Controlled-loop' Task Force will work out more specific targets with the relevant conversion industries by the end of 2013.

Innovative Recycling

VinylPlus is targeting for **'new recycling technologies' to account for 100,000 tonnes/year** of its overall recycling target. With the support of the upstream industry, VinylPlus will investigate new ways to create controlled-loop solutions for difficult-to-recycle PVC material streams, such as composites and/or contaminated/difficult-to-sort material. VinylPlus will encourage ideas and investments in new technology or expansion of existing innovative recycling solutions.

Legacy Additives

VinylPlus considers recycling the 'number one' priority. The presence of legacy additives is a reality. The industry will have to make sure that these substances are used in applications which are safe.

VinylPlus will take a leading role in addressing the issue of **legacy additives** in recycled PVC, integrating all parts of the value chain in assessing the potential impact with regards to sustainable development criteria. If the recycling of PVC materials that include legacy additives becomes limited by market demand, or through restrictive regulation, recycling targets will have to be revised accordingly.

A **'Controlled-loop' Task Force** started to work on the controlled-loop challenge at the beginning of 2011. All definitions and the delivery of detailed metrics for the recycling scheme are scheduled for the end of 2011, and will then be made publicly available.

CHALLENGE ONE: TARGETS

- 4.1.1. Recycle 800,000 tonnes/year of PVC by 2020
- 4.1.2. Exact definitions and reporting concept to be available by end 2011
- 4.1.3. Develop and exploit innovative technology to recycle 100,000 tonnes/year of difficult-to-recycle PVC material (within the overall 800,000 tonnes/year recycling target) by 2020
- 4.1.4. Address the issue of legacy additives and deliver a status report within each annual VinylPlus Progress Report

4.2. Challenge Two: Organochlorine Emissions

The participating companies in VinylPlus are committed to address any concerns related to the release of persistent chlorinated organic compounds from the life cycle of PVC to avoid systematic increases of concentrations in nature.

Organochlorines

The participating companies in VinylPlus are aware of the concerns expressed by stakeholders on the possibility that, if proper precautions and systems are not in place, organochlorines (dioxins, furans, etc.) can be released during some steps of the

manufacturing process leading to PVC resin; or during inappropriate end-of-life treatment of PVC.

Although companies operate according to the key parameters mentioned in the Best Available Technology Reference Document⁵ for the resin

⁵ The BREF for Large Volume Organic Chemical Industry was published in 2003 and is available at ftp://ftp.jrc.es/pub/eippcb/doc/lvo_bref_0203.pdf

production phase and specific EU regulation is defined to avoid emissions during incineration, the European industry recognises the need to play its part in addressing this issue.

The external stakeholder interviews have shown that communication and **transparency** regarding the progress and the remaining challenges has to be improved.

VinylPlus will therefore engage in discussing the concerns regarding organochlorine emissions/dioxins **with external stakeholders during the stakeholder event scheduled for the first half of 2012**. A plan of how to deal with these concerns, including the upstream industry and the end-of-life treatment will be developed.

PVC Resin Industry Production Charters

In 1995/1998 the Western European resin producers, of the then EU-15, signed **Industry Charters**⁶ which included various measures to reduce the environmental impact from the production of PVC resin. At the end

of 2010 the industry was independently audited and, even though the participation in the charter had been widened from its original EU-15 scope to cover the expanded geography of all EU-27 countries, more than 90% compliance was reported.

The resin industry will continue to work on reaching **full compliance**. A review audit for the remaining items will be carried out during first Quarter 2012 based on the results achieved during the second half of 2011.

Safe Transport

The **safe transport** of all raw materials remains a point of interest from external stakeholders although the security level has been extremely high over the last 10 years. The production committee of ECVM will evaluate a further potential reduction in the transport of raw materials, assessing in particular the transportation risk in all scenarios of VCM transportation. The industry targets a zero-accident rate regarding VCM release during transportation.

CHALLENGE TWO: TARGETS

- 4.2.1. Engage with external stakeholders in the discussion of organochlorine emissions during 2012
- 4.2.2. Develop a plan to deal with stakeholder concerns on organochlorine emissions by end 2012
- 4.2.3. Compliance with the PVC resin Industry Charters in first Quarter 2012
- 4.2.4. Risk assessment for the transportation of major raw materials, in particular VCM, by end 2013
- 4.2.5. Target zero-accident rate with VCM release during transportation in the next 10 years

⁶ The ECVM Industry Charters for VCM/S-PVC and E-PVC Production:
www.pvc.org/Sustainability/Industry-Responsible-care/European-Council-of-Vinyl-Manufacturers-ECVM-Charters

4.3. Challenge Three: Sustainable Use of Additives

The VinylPlus task force on ‘Additives’ started its work at the beginning of 2011 and integrates the downstream and upstream PVC supply chain as well as external expertise. The additive industry is committed to continue carrying out research on the safety, the sustainability, and the environmentally responsible use of additives.

As a first step, criteria for products have been developed to evaluate what ‘sustainability’ means with regards to additives. This evaluation needs to be applied both to existing additives and to the development of sustainable alternatives. These criteria have to be further elaborated and need to be demonstrated in practice both by the manufacturer/importer of additives and the downstream users in order to reflect their shared responsibility for the individual steps of the life cycle. The major responsibility of the manufacturer/importer of the additive is to provide relevant information on potential hazards of the substance.

Sustainability criteria need to cover the following key points:

- Sustainable additives are fully described and assessed using recognised test guidelines, for their long-term toxicology, their ecological impact, and their technical properties.
- Sustainable additives are safe to use in their specific applications.
- Categorisation of sustainable additives shall reflect their regulatory status (e.g. temporary REACH authorisation cannot be considered as being sustainable).
- Sustainable additives are described in LCAs covering all resource aspects and all sustainability impacts.
- Sustainable additives are fit for purpose in their specific applications.

ESPA stabiliser producers will actively promote VinylPlus sustainability principles outside the EU-27.

CHALLENGE THREE: TARGETS

- 4.3.1. Lead replacement in the EU-27 by end 2015
- 4.3.2. Robust criteria for the ‘sustainable use of additives’ to be developed, with status report by end 2012
- 4.3.3. Validation of the robust criteria for the ‘sustainable use of additives’ in conjunction with the downstream value chain, with status report by end 2014
- 4.3.4. Other PVC additive producers and the downstream value chain will be invited to participate in the ‘sustainable additives’ initiative

4.4. Challenge Four: Sustainable Energy & Climate Stability

The VinylPlus Voluntary Commitment will help to ensure the stability of our climate by reducing energy and raw material consumption, through process improvement and the use of recycled materials; and it will also consider the sustainability of resources such as renewable raw materials and energy sources.

Renewable Raw Materials

VinylPlus will develop a plan to increase the use of renewable raw materials, if they are sustainable, as an important pillar of sustainable development.

A specific '**Renewable Materials' Task Force** will coordinate the discussion across the PVC value chain integrating all relevant stakeholders and upstream manufacturers.

The **briefing for this Task Force** will be completed by the end of Quarter one 2012. The Task Force will start its work by mid-2012 and a first status report will be available by the end of 2012 and made public.

Energy Efficiency

The reduction of specific energy consumption is a general objective and will result from many of the VinylPlus Voluntary Commitment targets. The PVC value chain wants to develop and apply a common format for tracking progress whilst visualising the contributions made by the VinylPlus Voluntary Commitment through production and process

optimisation as well as through the use of recycled rather than virgin material.

PVC resin producers commit to reduce their specific energy consumption, targeting 20% by 2020. Other industries along the value chain will develop their respective targets by the end of 2012.

The short-term objective is to develop an easy to use format for assessing energy efficiency among companies in the PVC value chain, setting targets, initiating learning across the industry and setting up **an annual progress review**. Measurement will be achieved by auditing a representative sample of companies.

In the medium term, the Task Force 'Energy Efficiency' will assess the available Eco/CO₂/sustainability footprints indicators and evaluate their potential fit against VinylPlus member company products. A recommendation will then be made to the Board for a **suitable VinylPlus environmental footprint definition** by the end of 2014.

CHALLENGE FOUR: TARGETS

- 4.4.1. Establish Energy Efficiency Task Force by end 2011
- 4.4.2. PVC resin producers to reduce their specific energy consumption, targeting 20% by 2020
- 4.4.3. Define targets for specific energy reduction for converters by end 2012
- 4.4.4. Energy Efficiency Task Force to recommend suitable environmental footprint measurement by end 2014
- 4.4.5. Establish Renewable Materials Task Force by end first Quarter 2012
- 4.4.6. Renewable Materials Task Force's status report by end 2012

4.5. Challenge Five: Sustainability Awareness

Fulfilling its working principles, as listed in section 3, VinylPlus will intensify efforts for transparency and open communication with both internal and external stakeholders.

Independent Monitoring

VinylPlus will continue the best practice established under Vinyl 2010 and maintain an independent and critical Monitoring Committee, with the majority of members being external stakeholders (representatives from the European Parliament, the European Commission, trade unions as well as retail and consumer organisations). The Monitoring Committee will be led by an independent Chairperson.

Maintain 'Critical Friendship' with an NGO

The 10-year programme of VinylPlus has been developed with the help of TNS (The Natural Step), an international NGO, specialising in, and highly respected for its approach to 'sustainable development'. The role of a 'critical external friend' will be maintained, with an external NGO not only following the programme and challenging the progress, but also acting as a capacity builder across the value chain in offering knowledge and the opportunity for member companies to obtain mentoring for their individual sustainable development programmes. The involvement of an external NGO will also provide the opportunity for the Monitoring Committee to benefit from external advice and will ensure that VinylPlus keeps in regular dialogue with external stakeholders.

Annual Reporting

As with Vinyl 2010, an independently verified and audited report detailing the progress being made against each of the VinylPlus targets will be published annually and proactively circulated to relevant stakeholders.

External Stakeholder Dialogue

In 2010 VinylPlus began to open a new dialogue with more than 100 external stakeholders (conducted by TNS) to explore the current challenges for PVC and the potential shape of the new programme. This communication will be continued and widened to ensure that critical stakeholder groups, such as politicians, end users, specifiers, and NGOs can give their contribution to the implementation of the programme.

Stakeholder Communication

VinylPlus will continue to communicate about its activities to internal and external stakeholders, involving the PVC industry organisations at a national level, and will maintain a permanent public web portal www.vinylplus.eu. It will also seek to access wider audiences with other communication initiatives such as the online 'Sustainable Thinking Platform', established under Vinyl 2010, which reaches out to a community of approximately 3,000 young adults interested in sustainable development, and which will be able to provide an opportunity for feedback on important questions and issues related to the programme.

Visible Membership and Product Participation

An important element of the VinylPlus awareness building will be the use of a **VinylPlus product label and Membership Certificate to raise the profile of the programme** and to create more **value for programme participants**.

An official Membership Certificate will be available by the end of 2011.

VinylPlus needs additional members, especially from the converting industry and among downstream users (recyclers, retailers, brand holders) to broaden its regional scope, increase its impact and improve its financial capabilities. Companies across the value chain will be contacted and invited to participate.

VinylPlus will encourage member companies to translate the programme's objectives and principles into their organisation by helping them to set their own sustainable development targets.

A **VinylPlus label for PVC products** will be developed and launched by end 2012. The aim of the label is to allow customers/specifiers to better identify PVC products or solutions that contribute to sustainable development. Consumers, industry and procurement decision-makers will then have more transparent information to enable them to make smart and sustainable choices.

The label and its rigorous criteria will be developed, applied and audited with the help of an independent body.

VinylPlus Engaging Globally

On top of its broadening regional scope and an expansion in the number of participants within the European Union, VinylPlus will engage in efforts to **globalise the approach** by encouraging similar voluntary sustainable development initiatives elsewhere in the world.

- Inviting companies and associations in the PVC industry worldwide to become associate members of VinylPlus and demonstrating how to plan a path to sustainable development.
- Through its global links with other trade associations, ECVM will promote VinylPlus in other continents, like the ASEAN countries, Japan, Australia, North and South America.
- ESPA stabiliser producers will actively promote VinylPlus sustainability principles to the markets outside the EU-27.
- VinylPlus will enter into a proactive dialogue with global brand holders to explain and promote the VinylPlus commitment to sustainable development.

CHALLENGE FIVE: TARGETS

- 4.5.1. VinylPlus web portal to go online in Summer 2011
- 4.5.2. VinylPlus Monitoring Committee, which will meet a minimum of twice a year, will be established by end 2011
- 4.5.3. A VinylPlus Membership Certificate will be launched end 2011
- 4.5.4. A public, and independently audited, VinylPlus Progress Report will be published annually and proactively promoted to key stakeholders. With the first edition being published in 2012
- 4.5.5. Annual external stakeholder meetings will be organised, commencing in 2012
- 4.5.6. A VinylPlus product label will be launched by end 2012
- 4.5.7. ECVM will take an active role in promoting VinylPlus within international PVC industry organisations worldwide
- 4.5.8. ESPA stabiliser producers will actively promote VinylPlus outside the EU-27
- 4.5.9. VinylPlus will increase the number of programme participants by 20% compared to 2010 by end 2013
- 4.5.10. VinylPlus will engage with five global brand holders by end 2013
- 4.5.11. A review of progress towards the globalisation of the approach will be undertaken by end 2015

5. SUMMARY OF VINYLPLUS® PLANNED MILESTONES

	<u>Challenge One</u> CONTROLLED LOOP	<u>Challenge Two</u> ORGANOCHLORINE EMISSIONS	<u>Challenge Three</u> SUSTAINABLE ADDITIVES	<u>Challenge Four</u> SUSTAINABLE ENERGY USE	<u>Challenge Five</u> SUSTAINABILITY AWARENESS
2011	Exact definitions and reporting concept			Energy Efficiency Task Force established	VinylPlus web portal to go online Monitoring Committee established Membership Certificate launched
2012	1 st report on legacy additives	Plan to deal with stakeholder concerns Compliance with the PVC resin Industry Charters	Criteria developed by Additives Task Force	Renewable Materials Task Force established Targets for specific energy reduction for converters	1 st VinylPlus yearly Progress Report 1 st External stakeholder meeting VinylPlus product label launched
2013	Specific conversion industries' targets on recycling	Risk assessment for the transportation of major raw materials, in particular VCM			Number of members increased by 20% Engagement with 5 global brand holders
2014			Validation of additives criteria	Recommend suitable footprint measurement	
2015	Formal interim review of all targets	Formal interim review of all targets	Formal interim review of all targets Lead replacement in the EU-27	Formal interim review of all targets	Formal interim review of all targets Review of progress towards globalisation
10 YEARS	Recycling of 800,000 tonnes/year of PVC including 100,000 tonnes/year of difficult-to-recycle PVC material	Target zero-accident rate with VCM release during transport for the 10-year period	ESPA will actively promote VinylPlus outside the EU-27	Resin producers target to reduce specific energy consumption by 20% by 2020	ECVM to take an active role in promoting VinylPlus within international PVC industry organisations worldwide

6. REVIEW OF TARGETS



The targets detailed within section 4 responding to the five VinylPlus challenges are based upon our current knowledge. As the industry progresses on its sustainable development journey, achievement against these specific targets will be constantly reviewed and reported within the annual VinylPlus Progress Reports.

Each stakeholder event will be used to gain feedback, inviting new ideas.

A formal interim review of all targets is foreseen in 2015.

7. VINYLPLUS® VOLUNTARY COMMITMENT SIGNATORIES

On behalf of the VinylPlus Board,



Dr. Josef Ertl
Chairman VinylPlus Board
ECVM



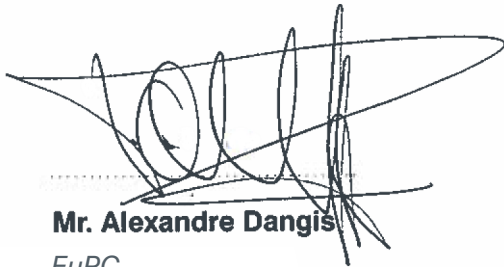
Mr. Filipe Constant
ECVM



Dr. Brigitte Dero
ESPA



Dr. Ettore Nanni
ESPA



Mr. Alexandre Dangis
EuPC



Mr. David Clark
EPFLOOR



Mr. Michael Kundel
Vinyl Foundation / IVK



Mr. Hans Telgen
TEPPFA



Mr. Ashley Reed
ECVM



Dr. Helmut Leitner
ECVM



Mr. Rainer Grasmück
ESPA



Dr. Norbert Scholz
ECPI



Mr. Joachim Eckstein
ERPA / IVK



Mr. Andreas Hartleif
EPPA

- ECVM** (the European Council of Vinyl Manufacturers)
- ESPA** (the European Stabilisers Producers Association)
- ECPI** (the European Council for Plasticisers and Intermediates)
- EuPC** (the European Plastics Converters)
- EPFLOOR** (the European PVC Flooring Manufacturers)
- EPPA** (the European PVC Window Profile and Related Building Products Association)
- ERPA** (the European Rigid PVC-Film Association)
- IVK** (Industrieverband Kunststoffbahnen e.V.)
- TEPPFA** (The European Plastic Pipes and Fittings Association)
- EPCoat** (PVC Coated Fabric Sector Group)
- ESWA** (European Single Ply Waterproofing Association)

Brussels, 22 June 2011



APPENDIX

Member Organisations' Contact Details

If you would like more information on the VinylPlus Voluntary Commitment or any of the issues raised within this document, please consult the VinylPlus web site, www.vinylplus.eu or contact any of the organisations listed below:

ECVM (the European Council of Vinyl Manufacturers)

Representing the 13 European PVC resin producing companies which account for almost 100% of the current total EU-27 PVC resin production. These businesses operate around 60 different plants spread over 35 sites and employ approximately 10,000 people.

The European Council of Vinyl Manufacturers,
Avenue E Van Nieuwenhuyse 4/4
B-1160 Brussels, Belgium
Tel. +32 (0)2 676 74 45
Fax +32 (0)2 676 74 47
www.pvc.org

ESPA (the European Stabilisers Producers Association)

Representing 11 companies which produce more than 98% of the stabilisers sold in Europe. They employ some 5,000 people.

The European Stabiliser Producers Association
Avenue E Van Nieuwenhuyse 4/2
B-1160 Brussels, Belgium
Tel. +32 (0)2 676 72 86
Fax +32 (0)2 676 73 01
www.stabilisers.org

ECPI (the European Council for Plasticisers and Intermediates)

Representing the seven major European plasticiser and intermediate producers that employ approximately 1,200 people in plasticiser production.

The European Council for Plasticisers
and Intermediates
Avenue E Van Nieuwenhuyse 4/1
B-1160 Brussels, Belgium
Tel. +32 (0)2 676 72 60
Fax +32 (0)2 676 73 92
www.ecpi.org

EuPC (the European Plastics Converters)

Representing close to 50,000 companies in Europe that produce over 45 million tonnes of plastics products of various types every year. EuPC estimates that around 21,000 of these businesses (many of which are SMEs), employing over half a million people, are involved in the conversion of PVC into final home and industrial products.

The European Plastics Converters
Avenue de Cortenbergh 71
B-1000 Brussels, Belgium
Tel. +32 (0)2 732 41 24
Fax +32 (0)2 732 42 18
www.plasticsconverters.eu

EPFLOOR (the European PVC Flooring Manufacturers)

EPPFLOOR is an EuPC Sector Group. Its mission is to recycle increasing quantities of post-consumer PVC flooring waste in Western Europe. EPFLOOR membership is composed of all the major Western European PVC flooring manufacturers representing, over 90% of the production.

The European PVC Flooring Manufacturers
Avenue de Cortenbergh 71
B-1000 Brussels, Belgium
Tel. +32 (0)2 732 41 24
Fax +32 (0)2 732 42 18
www.epffloor.eu

EPPA (the European PVC Window Profile and Related Building Products Association)

EPPA is an EuPC Sector Group. It concerns linear rigid or cellular PVC products for the building industry produced by means of extrusion technology. Related building products refer to all rigid PVC and cellular profiles used for finishing windows, home protection as well as internal and external decoration.

The European PVC Window Profile and Related Building Products Association
Avenue de Cortenbergh 71
B-1000 Brussels, Belgium
Tel. +32 (0)2 732 41 24
Fax +32 (0)2 732 42 18
www.eppa-profiles.org

ERPA (the European Rigid PVC-Film Association)

ERPA is an EuPC Sectorial Organisation. PVC rigid film is an intermediate product for finished articles in a diverse range of application areas which includes a large amount of rigid packaging for food, pharmaceutical and non-food products.

The European Rigid PVC-Film Association
Avenue de Cortenbergh 71
B-1000 Brussels, Belgium
Tel. +32 (0)2 732 41 24
Fax +32 (0)2 732 42 18

www.pvc-films.org

IVK (Industrieverband Kunststoffbahnen e.V.)
IVK, the German Association of Coated Fabrics
and Films is an EuPC Sectorial Organisation.

Emil-von-Behring-Straße 4
D-60439 Frankfurt/Main, Germany
Tel. +49 (0)69 572064
Fax +49 (0)69 574537
www.ivk-frankfurt.de

TEPPFA (The European Plastic Pipes and

Fittings Association)

TEPPFA is an EuPC Sectorial Organisation,
representing manufacturers and national
associations of plastic pipe systems in Europe.

The European Plastic Pipes and Fittings
Association
Avenue de Cortenbergh 71
B-1000 Brussels, Belgium
Tel. +32 (0)2 736 24 06
Fax +32 (0)2 736 58 82

www.teppfa.org

EPCoat (PVC Coated Fabric Sector Group)

EPCoat is an EuPC Sector Group and operates
within EuPC as European coordinator on the
recovery and recycling of PVC coated fabric
products (such as tarpaulins, tents, marquees,
etc.)

PVC Coated Fabric Sector Group
Avenue de Cortenbergh 71
B-1000 Brussels, Belgium
Tel. +32 (0)2 732 41 24
Fax +32 (0)2 732 42 18

**ESWA (European Single Ply Waterproofing
Association)**

ESWA is the EuPC Sectorial Association which
represents the leading producers of thermoplastic
roofing membranes in Europe, accounting for
over 85% of the market share.

European Single ply Waterproof Association

Avenue de Cortenbergh 71
B-1000 Brussels, Belgium
Tel +32 (0)2 739 63 83
Fax +32 (0)2 739 63 77
www.eswa.be



NOTES

A series of horizontal dotted lines for writing notes, spanning the width of the page.



VinylPlus© June 2011
www.vinylplus.eu