



Vinyl 2010

Executive Summary

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Report on the activities of the year 2004



EXECUTIVE SUMMARY

THE VOLUNTARY COMMITMENT AND VINYL 2010

Signed in 2000, the Voluntary Commitment is a ten-year plan to deliver continuous improvements in product stewardship across the lifecycle of PVC. Vinyl 2010 puts this into practice within the framework of Sustainable Development. It aims to minimise the environmental impact of PVC resin production, establish a comprehensive waste management strategy and ensure plasticisers and stabilisers can be used safely.

Vinyl 2010 emphasises clear numerical targets on recycling, significant investment on scientific and technical research, expanding technical expertise, practical experience, transparency and promoting social dialogue. Progress against targets is reported via independently audited annual reports.

DEVELOPMENTS IN 2004

2004 saw continued solid progress toward the intermediate targets set for 2005 with certain outstanding highlights and – as to be expected in any 'learning by doing' approach – new challenges and some setbacks.

RESIN MANUFACTURING

During 2004 the European Council of Vinyl Manufacturers (ECVM) continued to make progress with respect to its two Charters aimed at minimising further the environmental impact and improving the eco-efficiency of PVC resin production.

An ECVM Task Force initiated a comprehensive study on the compliance results of the Charter on S-PVC, Ethylene Dichloride (EDC) and Vinyl Chloride Monomer (VCM) and an upgrade of measurement methodologies. Meanwhile, verification of the E-PVC Charter has been conducted.

PLASTICISERS

In 2004, the European Council for Plasticisers and Intermediates (ECPI) contributed more than €630,000 to research on mechanisms of reproductive toxicity, epidemiology studies on asthma, human exposure and biomonitoring. A major study with human volunteers is now scheduled for 2005. EU Risk Assessments on plasticisers dibutyl phthalate (DBP), diisononyl phthalate (DINP) and diisodecyl phthalate (DIDP) moved forward to the final stages of completion. The risk assessments for di-(2-ethylhexyl) phthalate (DEHP) and butyl benzyl phthalate (BBP) are still under discussion by the EU Member States but are expected to be completed in 2005.

STABILISERS

The challenging target set for end 2005 on the reduction of lead stabiliser sales by 15% by members of the European Stabiliser Producers Association (ESPA) was reached ahead of schedule in 2004. However, the industry will have to maintain its vigorous and demanding efforts in 2005 and prepare actively for the next reduction targets. Vinyl 2010 will organise external verification of the 2005 figures.

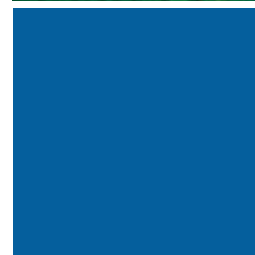
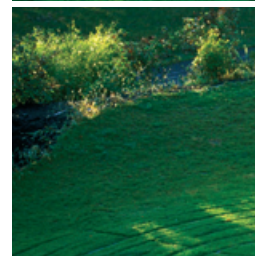
WASTE MANAGEMENT PROJECTS

Overall progress was again strong in the EuPC – European Plastics Converters – sectoral projects. Collection schemes for end-of-life PVC products continued to develop, to learn from experience and benefit from synergies with each other.

Paradoxically, however, high demand, rising raw material prices and the intrinsic longevity of many PVC applications, appear to be exercising downward pressure on the availability of end-of-use PVC to collect and recycle.

Highlights of the waste management projects over the year were:

- Recycled post-consumer window waste from the projects operated by EPPA (the European PVC Window Profile and Related Building Products Association) rose to 5,429 tonnes. Recycled post-consumer related profiles waste reached 2,865 tonnes. New schemes began in Sweden, Norway, Italy and Ireland.
- TEPPFA (the European Plastic Pipes and Fittings Association) recycled 5,640 tonnes of PVC pipes and fittings. National schemes performed well in most countries. Strong demand for recyclates and greater professionalism in the sector were encouraging.
- ESWA (the European Single Ply Waterproofing Association) recycled 568 tonnes of PVC waste from roofing membranes – representing more than 25% of the total collectable available PVC waste for this application.
- The Edelweiss study project matured into the “ROOFCOLLECT Recycling System for Thermoplastic Membranes” with a geographical extension and an enlargement of scope. At national level, operations were consolidated and extended in Germany – the largest market – and began in Austria, Benelux and France. Preparations were also made to initiate systems in Italy and in the Nordic countries in 2005.
- Recovinyl analysed existing collection projects to evaluate availability and cost of collecting PVC waste, especially in Belgium and Germany. Recovinyl supports the Vinyl 2010 recycling targets via financial and other incentives to facilitate collection and dispatching.
- The flooring collection schemes of EPFLOOR (the European PVC Floor Manufacturers) were particularly successful achieving 972 tonnes - an increase of 68% over 2003. The association will continue to focus on the development of existing national collection schemes in 2005. EPFLOOR also deepened its understanding of options and financial viability through a series of important tests to evaluate a variety of recycling technologies.
- Concerning coated fabrics, EPCOAT (EuPC PVC Coated Fabrics Sector Group) feasibility studies continued. In particular, research by SFEC – the French calendaring and coating association – identified where and how to collect potentially recyclable homogeneous waste. A trial collection project started in Germany in cooperation with RWE, a major waste management operator. The German company Friedola also upgraded its existing recycling plant in preparation for further practical trials.



NEW RECYCLING TECHNOLOGIES AND TRIAL PLANTS

With financial support from the EU LIFE programme and from Vinyl 2010, the Danish company RGS-90 brought to near completion a full-scale industrial demonstration project for recycling of PVC waste into oil, salt and minerals. The plant has the capacity to recycle 50,000 tonnes of PVC waste per year. Start-up is projected for summer 2005.

The Redop project (REDuction of iron Ore in blast furnace plants by Plastics from municipal solid waste) is a feedstock recycling treatment for mixed plastics/cellulose fractions from municipal solid wastes (MSW). Approximately one tonne of Redop pellets was produced and successfully used in a blast furnace of the CORUS steel company. Redop is considering further industrial scale trials in 2005.

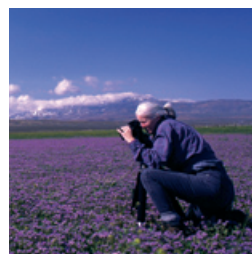
Since February 2002, Vinyloop has operated a full-scale demonstration plant at Ferrara, Italy, based on solvent technology. The first of its type in the world, the plant encountered technical difficulties caused principally by the quality and consistency of the cable-waste raw material. This necessitated further research and development. The Ferrara plant was also used to test new residue streams such as blisters, roofing and flooring.

Supported by Vinyl 2010, the Halosep-Watech process involves the treatment of flue gas residues arising from municipal solid waste incinerators to recover chlorides and heavy metals. The pilot plant will be operational in early 2005 with a testing programme until June.

OTHER PROJECTS

Certain building applications use light concrete for floors or walls where low weight and high thermal and sound insulation are required. A study in 2004 concluded that it is technically and economically feasible to use PVC waste from construction and demolition. Further studies are now underway.

The definition of recycling is important. In 2004, Vinyl 2010 commissioned a legal assessment in cooperation with German incinerator operator MVR Müllverwertung Rugenberger Damm GmbH & Co. KG. Preliminary analysis indicates that incineration should be considered as an energy recovery operation (and not as waste disposal). The second step (HCl recovery) can, under certain conditions, be classified as recycling.



MONITORING, ACCESS TO INFORMATION, AND STAKEHOLDER RELATIONS

GUIDANCE FROM THE MONITORING COMMITTEE

The Monitoring Committee guides Vinyl 2010 and furthers dialogue with stakeholders to help industry provide information that meets their needs and expectations. Under the chairmanship of Professor Alfons Buekens of the Free University of Brussels (VUB), the Committee held two meetings in 2004 with senior representatives from EU institutions and from trade unions.

FINANCE

Expenditure by Vinyl 2010, including EuPC and its members, on various waste management projects totalled €4.15 million in 2004.

INDEPENDENT AUDITS

Vinyl 2010 aims for maximum transparency and has engaged independent auditors and verifiers.

- ✦ The financial accounts were audited and approved by KPMG.
- ✦ KPMG also audited the statement of tonnages of products recycled.
- ✦ The 2005 Progress Report was reviewed by DNV Consulting and verified as giving a true and honest representation of Vinyl 2010's performance and achievements.

ENCOURAGING PUBLIC ACCESS TO INFORMATION

The industry provides wide and open access to information about Vinyl 2010's work. Throughout the year Vinyl 2010 maintained its programme of participation in meetings, presentations and presence at major conferences such as Green Week and the 9th European Roundtable on Sustainable Consumption and Production. A major endorsement was the decision by the United Nations Commission on Sustainable Development to register Vinyl 2010 as an official partner.

All annual Progress Reports, published since 2001, are available in the main EU languages on www.vinyl2010.org.

EU ENLARGEMENT & SOCIAL DIALOGUE

Vinyl 2010 continued its efforts to improve social dialogue and standards on health, safety and the environment in Central and Eastern Europe. Representatives from the 10 new EU Member States attended a seminar in April 2004 in Budapest, organised by Vinyl 2010.

2005 MIDTERM REVIEW

From the beginning, industry committed publicly to review its progress and objectives at midterm. As part of its learning -by-doing approach, Vinyl 2010 will examine and reappraise by the end of this year all basic assumptions – including its waste availability model – activities and targets, particularly in the context of EU enlargement and specific needs of new EU member states. The review will be conducted in close cooperation with the Monitoring Committee.



VINYL 2010
Avenue E Van Nieuwenhuyse 4, box 4
B-1160 Brussels — Belgium
Tel. +32 (0) 2 676 74 41
Fax. +32 (0) 2 676 74 47

REGISTERED OFFICE:
Avenue de Cortenbergh 66, box 4
B-1000 Brussels — Belgium





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2 0 0 5

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