

Message from Andrew Feldman:

European Commission
Att: Mr. Schulte-Braucks
Head of the Chemicals Unit (DG Enterprise)
200 rue de la Loi
B-1049 Brussels
BELGIUM

06/11/00

Dear Mr Schulte-Braucks,

I am an employee of ATOFINA UK Ltd. company based in the region of Birmingham and active in the Chemicals and Polymers industries, I am very concerned about the Commission's green paper. I have closely studied the points for and against this document as well as those clarified in the Voluntary Commitment of PVC manufacturers. My PVC business accounts for ~40 million Euros and directly affects around 3000 jobs.

I am also a parent and householder who enjoys the benefits of PVC such as reduced energy bills and reduced use of chemicals through double glazed windows as well as seeing my children develop through play with sophisticated toys made from PVC

I would like to make the following comments:

- PVC is one of the most modern synthetic materials
- PVC is one of the most scientifically studied products and has passed this inspection with excellent results
- To force users to a less well researched material would be ethically and morally reprehensible for the individual and society as a whole
- It offers an important added value to society due to its numerous uses such as – medical equipment, pharmaceutical packaging, floor coverings in the home and hospitals, low maintenance window frames, good energy performance, water distribution pipes lasting around 100 years etc
- Our company produces ready to use vinyl compositions; our products are known to be safe in use
- I know that other plastic or natural materials can be used for certain uses but these are often less efficient economically and/or ecologically than PVC
- PVC recycling is not as important as some other materials because it has a long life cycle eg Window frames and other building products

- Enormous progress has been made in our factories to reduce the impact of our waste on the environment
- Whichever material is considered, the products become waste after their first life. The recycling of PVC is progressing in all European countries and new technologies are being developed : this will allow future generations to appropriately treat PVC at the end of its life
- Many of the questions raised in the green paper apply to all materials and not only to PVC. It is for this reason that I do not understand why the Commission is being so insistent about PVC in particular
- The importance of the PVC industry, including “converting” small and medium industries is considerable in Europe

This is why I support the Voluntary Commitment of the PVC industry, which has been presented to me by my employer and customers.

In conclusion I recommend that the Commission keep the proposals of the Voluntary Commitment: these will allow efficient advances to improve the ecological and economic situation of PVC.

I hope that PVC can be treated like any other synthetic or natural material.

Yours sincerely
Andrew Feldman
Sales Development Manager and Parent

Benecke-Kaliko AG · Postfach 709 · D-30007 Hannover

European Commission
z.Hd. Herrn Schulte-Braucks
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1049 Bruxelles
Belgique

Your reference

Your message

Our reference BR/Min

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Hannover, den 22.11.2000

PVC-Diskussion

Sehr geehrte Damen und Herren,

Wir, die Mitarbeiter, Vertrauensleute und Betriebsräte der Benecke-Kaliko AG Werk Hannover verfolgen die Diskussion über PVC mit Interesse, aber auch mit Sorge. Seit Jahren arbeiten wir bei der Benecke-Kaliko AG in Hannover mit dem Werkstoff PVC.

Wir sind für PVC, weil dieser Werkstoff sowohl in der Produktion als auch beim fertigen Produkt ein hervorragendes Preis-Leistungsverhältnis hat und vom Markt angenommen wird.

Wir werden medizinisch gut betreut und haben Sicherheits- und Umweltstandards.

Das Recycling von PVC in unserem Hause betreiben wir schon seit vielen Jahren über eigene Anlagen.

In unserer Firma hängen mehr als 1.200 Arbeitsplätze direkt am Kunststoff PVC. Eine Einschränkung der PVC-Verwendung ist für uns völlig unverständlich und bedroht unsere Existenz direkt.

Deshalb haben wir in einer sehr kurzfristigen Aktion am 3. und 6.11.2000 eine Unterschriftenaktion zur PVC-Diskussion im Werk durchgeführt. An der Aktion haben sich 353 Mitarbeiter beteiligt und sich damit gegen eine Einschränkung der PVC-Verwendung ausgesprochen.

Bitte berücksichtigen Sie das bei Ihren Überlegungen.

Mit freundlichem Gruß

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CONTITECH

Message from Employees of Benecke-Kaliko AG :

Sehr geehrter Herr Krämer,

wir verfolgen die Diskussion über PVC mit Interesse, aber auch mit Sorge. Seit vielen Jahren arbeiten wir bei der Benecke-Kaliko AG in Hannover mit dem Werkstoff PVC.

Wir sind für PVC, weil dieser Werkstoff sowohl in der Produktion als auch beim fertigen Produkt ein hervorragendes Preis-Leistungsverhältnis hat und vom Markt gern angenommen wird.

Wir arbeiten in der Produktion und finden die Arbeit nicht ungünstiger als wenn wir mit anderen Rohstoffen arbeiten würden. Wir haben hohe Sicherheits- und Umweltstandards und stellen sicher, daß keine Umweltbelastung von unserer Produktion ausgeht.

Das Recycling von PVC in unserem Hause betreiben wir schon seit vielen Jahren über eigene Anlagen.

In unserer Firma hängen mehr als 1.200 Arbeitsplätze direkt am Kunststoff PVC. Eine Einschränkung der PVC-Verwendung ist für uns völlig unverständlich und bedroht unsere sowie auch die Existenz vieler anderen Kollegen.

Bitte berücksichtigen Sie das bei Ihren Überlegungen

Mit freundlichem Gruß

Heinz-Jürgen Reiter	Ute Foltin	Heino Koch	Claus Schneider
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Message from P. Benoit-Godet :

European Commission

**Att : Dr L. Krämer, DG
Environment**

200 rue de la Loi

B-1049 Brussels

BELGIUM

La Celle Saint Cloud le 23/10/2000

PVC LE LIVRE VERT

Cher Monsieur Krämer,

Je suis employée de la société Alphacan située à La Celle St Cloud spécialisée dans la transformation de matières plastiques et me sens particulièrement concernée par le livre vert de la commission. J'ai étudié attentivement les points pour et contre de ce document, ainsi que ceux explicités dans l'Engagement Volontaire des producteurs de PVC.

Je souhaite faire les commentaires suivants :

- ✓ Le PVC est un des matériaux synthétiques les plus anciens et pourtant il a su par ses performances, rester l'un des plus modernes et des plus utilisés :
- ✓ Il offre une valeur ajoutée importante à la communauté, par ses nombreuses applications telles que : équipement médical, emballage pharmaceutique, revêtement de sol pour la maison et l'hôpital, châssis de fenêtres sans entretien et d'excellente qualité d'isolation thermique, tubes pour la distribution d'eau alimentaire sans perturber ni le goût ni l'odeur, tubes pour l'évacuation des eaux usées parfaitement étanches et résistants à la corrosion, etc.
- ✓ Notre société fabrique des tubes et des profilés pour fenêtre depuis plus de 40 ans. Nos produits sont reconnus comme sûrs dans leurs applications et aucune dégradation n'a pu être observée sur ces produits pendant cette durée. Des tubes extraits de notre site allemand de Bitterfeld, âgés de plus de 40 ans ont passés avec succès les tests de résistance appliqués à nos productions actuelles.
- ✓ D'autres matériaux plastiques ou naturels peuvent être utilisés dans certaines applications mais ceux-ci sont souvent moins performants en terme économique et/ou écologique que le PVC.
- ✓ Des progrès très importants ont été réalisés dans nos usines et celles de nos fournisseurs pour réduire l'impact des rejets sur l'environnement: Tous nos rebuts de fabrication sans exception sont recyclés dans nos produits (zéro déchet) et nous recyclons même des produits régénérés en externe pour des fabrications particulières: en 1999, nous avons ainsi retransformé plus de 4000 tonnes de PVC en provenance de produits extérieurs à nos propres fabrications.
- ✓ Quel que soit le matériau considéré, les produits après leur première vie, deviennent déchets. Le recyclage du PVC progresse dans tous les pays d'Europe, et de nouvelles technologies sont en cours d'expérimentation pour récupérer le PVC même fixé sur d'autres matériaux (Cuir artificiels par exemple): ceci permet actuellement de régénérer de nombreux types de déchets et aux générations futures de traiter convenablement les produits PVC en fin de vie.

- ✓ De nombreuses questions évoquées dans le Livre Vert s'appliquent à tous les matériaux et pas seulement au PVC. C'est pourquoi je comprends mal que la Commission ne se focalise que sur le PVC.
- ✓ L'importance de l'industrie du PVC, y compris les petites et moyennes industries transformatrices, est considérable en Europe.

C'est pourquoi je soutiens l'Engagement Volontaire de l'industrie de PVC qui a été présenté dans nos usines.

En conclusion, je souhaite que le PVC soit traité comme tout autre matériau synthétique ou naturel et je recommande à la Commission de retenir les propositions de l'Engagement Volontaire : ce dernier permet l'approche la plus efficace pour améliorer la situation écologique et économique du PVC.

P.Benoit-Godet

Message from Bernard Lacorne :

Il existe des sujets que l'on aborde peu mais qui malheureusement touchent de nombreux malades. Un cancer, un accident peuvent amener des lésions internes irréparables dans les parois de l'intestin ou de l'estomac.

Les progrès de la médecine ont permis de trouver des solutions adaptées qui sauvent la vie de milliers de personnes chaque année. Des poches internes ou externes de substitution jouent le rôle des organes ainsi touchés, et ce, en toute discrétion.

Demandez à un chirurgien si de telles opérations seraient possibles sans l'usage du PVC. Aucun autre matériel ne possède les caractéristiques physiques et techniques du PVC. A l'heure actuelle, malgré les recherches entreprises sur le sujet, le PVC reste irremplaçable.

Doit-on renoncer à soigner ces malades et à faire progresser la médecine ?
Je ne le crois pas.

Bernard LACORNE
SPE FRANCE

Message from Bertrand Carteron :

Saint germain en Laye, France le 5 Novembre 2000

Concerne : livre vert de la commission européenne "Quel avenir pour le PVC en Europe"

Cher Monsieur SCHULTE-BRAUCKS,

Je suis employé de la société Alphacan situé à la Celle Saint Cloud près de Paris. Notre société est spécialisée dans la transformation des matières plastiques : PVC principalement. J'ai étudié attentivement le livre vert de la commission et je soutiens l'Engagement Volontaire de l'industrie de PVC qui a été présenté dans nos usines.

Je souhaite que le PVC soit traité comme un tout autre matériaux synthétiques ou naturel et je recommande à la Commission de retenir les propositions de l'Engagement Volontaire qui me paraît une approche efficace pour améliorer la situation écologique et économique du PVC
Recevez, cher Monsieur, mes sentiments les meilleurs

Bertrand Carteron
Alphacan groupe Ato-Fina

Message from Mr Bindelle :

Messieurs,

Ingénieur travaillant dans l'industrie du PVC depuis de nombreuses années, j'ai eu l'avantage d'accompagner cette industrie dans son processus d'amélioration continue des performance environnementale et de la démarche citoyenne des producteurs de PVC. L'issue de l'initiative de l'UE m'interpelle d'autant.

Le document met l'accent sur les différents problèmes posés actuellement et des solutions existent : les différentes filières de recyclage, les alternatives aux stabilisation par métaux lourd, des plastifiants alternatifs, y compris l'incinération avec récupération de l'énergie (et de HCl si nécessaire).

Développement durable.

- **l'incinération**

Suite à l'impact médiatique d'émission de dioxines par des incinérateurs "ancienne technologie" et des campagnes calomnieuses d'organisations comme Greenpeace, nos populations font l'amalgame entre l'incinération non contrôlée ("ancienne technologie") et les incinérateurs en conformité avec la Directive de l'Union Européenne.

Pour les générations futures et le développement durable, l'incinération propre devrait pourtant être remise à l'honneur pour les raisons suivantes:

- Elle réduirait d'autant les besoins de mise en décharge (je vis près d'une décharge à Mont-Saint-Guibert et préférerait avoir un incinérateur propre plutôt que de voir s'étendre cette dernière)
- les incinérateurs conformes, qu'ils incinèrent ou non du PVC, sont des puits à dioxines (ils détruisent les dioxines contenues dans les déchets)
- avec récupération de l'énergie contenue dans les matières plastiques, cela permet d'utiliser deux fois la molécule fossile (gaz, pétrole) une fois en passant par la matière plastique, une deuxième fois en la brûlant pour récupérer son énergie. Quel gaspillage de brûler directement une molécule que la nature a mis des millions d'années à synthétiser.
- **l'économie des ressources énergétiques par le PVC**

Vous pourrez voir dans les écobilans du berceau à la tombe publiés par l'APME et l'ECVM . Le PVC est injustement attaqué par des ONG peu objectives faisant fi des réalités scientifiques. Non seulement le PVC est toujours bien situé par rapport à d'autres matières plastiques, mais il est au contraire tout à fait recommandable car, comme décrit dans le livre vert, 57 % de sa molécule est constitué de chlore, produit aux réserves inépuisables.

- **Conclusion**

Le PVC est parmi les produits de synthèse le produit le mieux apte à préserver les ressources dans le cadre du développement durable. Dans l'intérêt des enfants de mes enfants, j'espère vivement que cet enjeu sera bien intégré dans vos réflexions.

Je vous transmets, Messieurs, mes meilleures salutations et me tiens à votre disposition,

Message from Mr Bokkler :

Je suis pour le PVC car; pour nous il n'y a pas une alternative.

Message from Mr Bourgeois:

Since the European Community's Green Paper could form the basis for European Union's regulation of PVC, I am pleased to be invited to comment on aspects of it. I am an employee of Occidental Chemical Corporation, a manufacturer of PVC resin in North America and I am concerned about the impact EU action might have on international trade, my company's business, our customers' business and my own job.

Any legislation regarding one single material is inappropriate without having equally analysed its alternatives. Such a comparison has to consider the whole life cycle of each specific application and not just end-of-life aspects. I look forward to the set of horizontal studies that must be done on every other material before such life cycle comparisons can rationally be made.

As a serious step forward on the track to sustainability, the PVC Industry has offered a Voluntary Commitment for improvement in many of the areas addressed by the Green Paper. It provides an opportunity to demonstrate good product stewardship by continuously improving manufacturing processes, addressing additives issues, increasing recycling and setting up a financial scheme to achieve the targets.

Voluntary action by companies is a progressive way of accomplishing environmental goals in cooperation with government. It should be the preferred EU policy.

Thank you,



**The British Plastics Federation's
Response to the European
Commission's Green Paper on the
Environmental Issues on PVC**

On Behalf of the UK PVC Industry

October 2000

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PART I - THE GREEN PAPER & THE PVC INDUSTRY

1. Introduction: PVC in Europe & Its Environmental Issues

The **Green Paper on Environmental Issues of PVC** is the result of the Horizontal Initiative, which gathers information from existing studies as well as five studies on end-of-life PVC. Through the Green Paper, the European Commission seeks to generate a Europe-wide strategy on the future of PVC in terms of its manufacture and waste management, and this will inevitably have a big effect on the industry.

Prior to this process, the European PVC Industry as represented by the European Council of Vinyl Manufacturers (ECVM), the European Council for Plasticisers and Intermediates (ECPI), the European Stabilisers Producers Association (ESPA) and the European Plastics Converters (EuPC), united voluntarily to address the issue of sustainability. This culminated in the **Voluntary Commitment of the PVC Industry (March 2000)**, signed by these four associations and endorsed by the PVC Industry in Europe.

The **Voluntary Commitment** pledges to work towards various environmental targets in the manufacture and waste management of PVC, in the period 2000-2010. In essence, this integrated approach promotes the concept of responsible 'cradle to grave' management.

The **Voluntary Commitment** is divided into four sections, 1) Manufacture of primary materials, 2) Use of additives, 3) Waste management, 4) Managing & Financing the commitments. The implementation of the **Voluntary Commitment** is open to public scrutiny and third party evaluation and verification, and an annual progress report is to be published by the end of March each year.

This voluntary approach represents both encouraging initiative on the Industry's part as well as the best approach for promoting and continuing sustainability of PVC.

A copy of the PVC Industry's **Voluntary Commitment** is enclosed. The British Plastics Federation believes that this commitment is the preferred method of dealing with issues, real and imaginary, raised by the Green Paper.

2. The British Plastics Federation (BPF) and the UK PVC Industry

The British Plastics Federation is the trade association for the UK Plastics Industry, representing firms from every link in the plastics supply chain, from polymer and additives producers, to manufacturers of finished and semi-finished PVC products as well as machinery suppliers and recyclers.

The BPF represents all plastics interests and is therefore an objective authority on PVC issues. The BPF Vinyls Group is the focal point for the UK's PVC Industry's representation.

There are an estimated 750 firms engaged in PVC production and processing as well as those who supply the machinery and equipment to manufacture PVC. These collectively employ somewhere in the region of 50,000 people in the UK. The total sales value of the industry is about £6 billion and the export value is approximately £1.5 billion. The UK uses approximately 750,000 tonnes of PVC every year.

The value of the UK PVC Industry has been registered by the DTI as part of its Technology Foresight programme in which PVC was cited as a key element of the chloralkali industry:

'PVC is perfectly safe and this is why it is used for bottles for mineral water, bags for blood transfusions, and fine bore tubing that is inserted into premature babies. PVC can be crystal clear or as black as coal, it can be as rigid or as flexible as we choose. It will stand up to extreme conditions and so is greatly used for windows, water pipes and insulation for electric wiring. Britain with its abundant supplies of salt and natural gas is an obvious place to manufacture this versatile plastic.' (1996)

This reflects the UK PVC Industry's role as a source of national competitive strength and as an industry of strategic importance for the country.

Whilst it is widely dispersed geographically, the economic importance of the UK PVC Industry is reflected in its areas of local concentration such as the Midlands and North of England where there is significant reliance on the PVC sector in terms of employment and commerce. A large proportion of firms are small and medium sized, often in family ownership. However, every part of the country is touched by the PVC Industry, because of the widespread use of PVC in applications essential to everyday life.

The recent publication of the Green Paper on the environmental issues of PVC, by the European Commission, marks an important stage in the current debate on this widely used and popular material. It is vital that the UK Government and the European Commission are fully cognisant of the Industry's viewpoints and concerns so it can arrive at a truly balanced appreciation of the issues raised.

The BPF can only accept a concluded horizontal study on PVC that is based on sound scientific evidence fairly interpreted, as this can only further the sustainability of the material which is obviously in the interests of the PVC supply chain, the consumer society as well as the environment as a whole.

3. The UK PVC Industry's Commitment to Sustainable Development

The UK PVC Industry has been highly proactive in committing itself to a sustainable future through various initiatives at both national and European level.

- The creation of the BPF's Vinyls Group has provided the Industry with a platform to evaluate and resolve environmental issues and to facilitate the exchange of information between manufacturers on best practice approaches. Within the BPF Vinyls Group itself, there is considerable dialogue and interchange between manufacturers and recyclers who work co-operatively to implement various strategies to further the sustainability credentials of PVC. Large scale communications programmes conducted through the BPF Vinyls Group provide users and consumers with objective information on PVC and its environmental and safety performances.
- The British Plastics Federation has accepted a DETR invitation to participate in the UK Chemicals Stakeholder Forum.
- PVC manufacturers have been working closely with major retailers in association with the National Centre for Business and Sustainability under the auspices of the 'PVC Co-ordination Group'. This group has worked to produce a binding Charter that represents an Industry commitment to sustainable development. **'An Environmental Charter for UK PVC Manufacturers'** commits the Industry to an Eco-efficiency Code of Practice for the production of PVC. This reflects a recognition that there is an environmental impact associated with the life-cycles of all industrial products, not merely PVC, and that the Industry has a duty to place environmental responsibility high on its agenda.

More recently, the PVC Co-Ordination Group commissioned The Natural Step, (TNS), in association with the UK Environment Agency, to evaluate the environmental impact of PVC against TNS system conditions. The Natural Step follows a set of criteria by which to test materials for their ecological influence. PVC was the first Industry to voluntarily collaborate in a Natural Step assessment. Although the analysis of PVC poses significant challenges to the industry, TNS is keen to state that there would obviously be similar challenges to any other natural or synthetic material. In his covering letter, Jonathon Porritt, Chairman of TNS, states:

"PVC may or may not have a place in a genuinely sustainable future (depending on whether or not it can meet the challenges

outlined in our Evaluation), but exactly the same questions must be asked of all materials, be they man-made or natural, before leaping to what are often ill-judged and unscientific conclusions."

The key ideal of the Natural Step is to examine a material in a global scientific context rather than on the basis of a single political issue. '**An Evaluation of PVC Using The Natural Step Framework**' has now been published and again demonstrates the UK Industry's commitment to sustainability.

- In addition, the UK PVC Industry is active in its part in conception and implementation of the European PVC **Voluntary Commitment of the PVC Industry** to the European Commission. Through this, the Industry pledges to attain various targets concerning raw material and additives production, and waste management in the period 2000-2010. The UK PVC Industry is a full supporter of the Voluntary Commitment.

4. The Green Paper - an overview

The Green Paper is the result of the Horizontal Initiative on PVC, which gathers information from existing studies as well as five studies on end-of-life PVC. The UK PVC Industry, on the whole, considers the Green Paper to be an unsatisfactory appraisal of the PVC lifecycle, as in many cases it seems that the Paper makes conclusions unsupported by the broader range of evidence available on PVC.

The Industry had only partial opportunity to contribute to the Paper, and information regarding the process was sometimes difficult to access. Certain parts of the procedure necessitated complaints to the European Commission by the European PVC Industry bodies about certain exaggerated tendencies and it was hoped that these areas would be redressed before publication of the Paper.

Whilst a good description of the PVC production is given, the Green Paper in general provides only a partial picture of the PVC scene. In order to provide a balanced appraisal of the issues raised, a follow-up study is required to examine the benefits of the material and products in use.

The one-sided nature of the Paper is also evident in its list of PVC's broad range of properties, where the implications of its utility are sadly missing. For example, it is because of its tough, chemical resistant nature that PVC is used to make life-saving blood bags and other medical applications, where currently it is highly questionable if there are alternative materials that would perform as well in the same situation.

It is said that chlorine represents 57% of the weight of the pure polymer resin, yet it is strange that there is no mention of the fact that this significantly limits

the environmental impact of PVC manufacture through its lower use of energy and finite resources.

The Paper is keen to propose PVC-specific initiatives in terms of regulation or legislation in areas that demand an examination of all materials and issues, and not just PVC and issues relating to PVC. This is particularly visible in its analysis of waste management, which the Paper generally concentrates on. The Industry considers that any in-depth review of a material must consider its whole lifecycle, and should be put into context in terms of an appreciation of alternative materials' credentials.

We consider the Paper to be very much a one-sided report that plays too much into the hands of extreme environmentalists who have little basis for their claims that PVC should be banned. This inevitably undermines the concept of a 'level playing field', without which the debate concerning PVC cannot continue in a just manner.

More importantly, the Paper does not properly focus on the interests of sustainability. The Paper's proposals go against the wealth of information collected by the Commission, including the horizontal initiative studies themselves, the outcomes of which clearly demonstrate that measures specific to PVC are unwarranted.

We believe that the report, as it stands at present, ignores the value of PVC itself and does not sufficiently emphasise the various voluntary initiatives that the industry is undertaking.

PART II - THE ISSUES RAISED BY THE GREEN PAPER

1. Additives: Stabilisers

A great emphasis is placed on heavy metal stabilisers when there is already a great deal of legislation restricting and regulating the use of cadmium and lead in plastics applications, as well as various voluntary pledges to either phase out certain heavy metals or research into alternatives.

1.1 Cadmium

The section dealing with cadmium stabilisers is misleading, as it fails to recognise existing legislation which restricts the use of cadmium in certain applications.

The Environmental Protection (Controls on Injurious Substances No.2) Regulations SI 1993 No 1643 clearly restrict the use of cadmium in various scenarios, in particular, 'as a stabiliser and marketing of products stabilised with cadmium'. This includes a ban on the use of cadmium stabilisers in packaging, office or school supplies, fittings for furniture, clothing accessories including all articles of apparel, floor and wall coverings, impregnated, coated, covered or laminated textile fabrics, imitation leather, records, pipes, swing doors, automotive applications, steel sheet coatings and wire insulation. Notably, the use of cadmium in window and related profiles is missing, and this is currently one permitted application of cadmium stabilisers in PVC.

The **Packaging (Essential Requirements) Regulations 1998 (S.I. 1998 No 1165)** which implements the **EC Directive on Packaging and Packaging Waste (94/62/EC)** curb the use of cadmium in packaging or its components. The total sum content of heavy metals in packaging or any of its components must not exceed 250 parts per million by weight after 30th June 1999, and this is restricted to 100 parts per million by weight on or after 30th June 2001.

The Paper also fails to emphasise the importance of the **Voluntary Commitment of the PVC industry** in Europe. This commits the Industry to phase out cadmium based stabilisers in 2001, Whilst the Green Paper gives coverage of the commitments themselves, there is no view given as to their importance or the fact that the need for regulation is lessened, if not fully removed by successful voluntary initiatives. In any case, as explained above, there is already sufficient legislation in place, and so with a combination of regulation and voluntary initiatives to phase out these types of application, a lengthy discussion regarding this strategy seems pointless.

1.2 Lead

We believe there is also insufficient recognition of the legislation already in place regarding the use of lead stabilisers. **The Packaging (Essential Requirements) Regulations 1998 (S.I. 1998 No 1165)** which implement the provisions of the **European Community Directive on Packaging and**

Packaging Waste (94/62/EC), visibly state limits on the total sum content of heavy metals, 250 parts per million by weight after 30th June 1999, and 100 parts per million by weight on or after 30th June 2001.

Although PVC stabilisers represent one of the main applications of lead salts in plastics, this is often misconstrued as an application of elemental lead, whereas for the purposes of stabilisers, it is only compounds of the heavy metals that are used. The lead organic salts used are bound up in the polymer matrix and have been shown not to leach out to the environment. (T. Hjertberg, 'Degradation of PVC in Landfills - a theoretical evaluation', Sweden 1995)

It is also important to recognise the article of the **Voluntary Commitment** to conduct risk assessments of lead based stabilisers under the CEFIC and ICCA programmes, 'Confidence in Chemicals' by 2004, and to continue to research alternatives to lead based compounds.

1.3 General

It seems unscientific to make judgements on these heavy metal based stabilisers when there are insufficient data available, and there is an admission of this in the Green Paper itself. No comprehensive risk assessments have been concluded for cadmium and lead compounds as stabilisers in PVC products. The contribution of lead from PVC as well as that in landfill is currently unknown, as 'no exact data are available'. It should be logically assumed however, that the contribution of heavy metals to landfill from PVC will be much lower than that compared with cadmium-rich batteries, for example.

We consider it highly premature to make such judgements regarding the future of heavy metal stabilisers when the Green Paper itself admits that, regarding incineration, 'the effect of substitution of lead or cadmium to the overall environmental emissions cannot be precisely quantified at present.'

The Considerations (Green Paper page 13, question 1)

We believe that there is no case for a ban on the use of lead and cadmium stabilisers, which in any case, would have to be justified on a scientific basis. As described above, there is already substantial legislation in place restricting the use of heavy metals. However, the European PVC Industry would obviously approve of legislation against imports of cadmium stabilisers and PVC applications containing cadmium, with the exception of recycled products.

The performance demands on products in terms of producer's liability and product safety are well maintained by current legislation, but this means opting for substances with unique properties which can offer these requirements. In terms of PVC applications, these legal obligations are maintained by opting for lead stabilisers which enhance the insulation, UV and weather resistance properties of PVC. Indeed, this extends the service life of

PVC products thus minimising waste. Such obligations restrict further reduction in the use of such stabilisers.

All available information makes plain that use of lead stabilisers in PVC is safe. This has been confirmed by the UK Drinking Water Inspectorate (1995), the Swedish Environmental Protection Agency, the Swedish Water and Waste Waterworks Association, the World Health Organisation and the OECD (1994), which have all approved the use of lead stabilisers in PVC pipes intended to carry drinking water. In addition, an official Swedish test institute conducted tests to see how lead migration from PVC pipe would compare to the limits set down in the **EU Ceramics Directive**, which covers food contact applications. They concluded that it is just as safe to eat meals off lead stabilised PVC as it is to eat them off a ceramic plate. **(Packforst Consultant AB, Project Nos. 215545 and 215574 for Nordic Plastic Pipe Association, November 1995).**

While no truly recognised risk assessment on lead stabilisers has been completed, it seems most fitting to undertake a voluntary approach, particularly as it has been agreed in the **Voluntary Commitment** to support such studies.

2. Additives: Plasticisers

The main type of plasticiser used in PVC is a class of chemicals called phthalates. There is already a great deal of legislation constraining the use of phthalates in food contact on the basis of migration limits.

The **The Plastic Materials and Articles in Contact with Food Regulations 1998 (SI (1998) No 1376)** applies the provisions of **EC Directives 95/3/EC** and **96/11 EC**, and this gives clear restrictions regarding the use of plasticisers in these applications.

Whilst the Green Paper gives much coverage to phthalates, it is conceded that further data is required for proper assessments of alternatives. We are sceptical of impulsive judgements concerning the future use of phthalates without knowing first whether or not there are technically better or safer alternatives.

Phthalates are subject to Risk Assessment under the **EC Directive on Existing Substances, (Council Regulation (EEC) No 793/93, March 1993)**. The current status of these Risk Assessments suggests there are no elements that could justify measures against the use of phthalates in PVC applications. In any case, the full Risk Assessments will not be available until the end of 2000 at the earliest, and it would surely be premature to legislate without these results.

Phthalates have been indicted as both endocrine disruptors and carcinogens. Recent robust *in vivo* studies on a range of commercially available phthalates have not revealed any oestrogenic effects, (for example **Zacharewski et al**,

1998), and many of the perceived adverse effects on health are derived from tests on rodents rather than primates.

The case concerning plasticisers in the Green Paper appears to be based on the ARGUS / Rostock study, the validity of which is hotly disputed by most scientists.

It should be noted that the International Agency for Research on Cancer (IARC) conducted studies in February 2000. As a result, the IARC downgraded its classification of DEHP from group 2b to group 3 (not classifiable as a human carcinogen). We find it illustrative of the selective nature of the Paper that this was not cited.

The assessment by CSTE of phthalates in baby teething rings is mentioned. Whilst there was a subsequent emergency ban implemented by the European Commission, the paper fails to mention that there was a great deal of division between these two bodies on this matter, as CSTE felt their evidence and concerns were being misinterpreted. At the time, CSTE found 'no immediate risk to human health', and later advised the European Commission to not renew the ban, advice which the Commission has ignored.

Phthalates are primarily used to make flexible PVC, a vital material for life-saving medical applications in terms of flooring, wall-covering, blood bags, gloves, and other similar products where a strict level of hygiene and safety is essential.

In early 1999, a Blue Ribbon Commission was formed by The American Council on Science and Health, under former US Surgeon General, C. Everett Koop, with sixteen other top scientists and physicians. The group's remit was to examine the issues concerning phthalates in PVC medical and toy applications. In June 1999, they concluded that DEHP in healthcare products was not harmful to humans, even in high doses and that DINP in toys in everyday use was not harmful to children. (**"A Blue Ribbon Report: A Scientific Evaluation of Health Effects of Two Plasticisers Used in Medical Devices and Toys"** (New York: American Council on Science and Health, 1999))

This study is highlighted amongst others as an example of recognised scientific evidence that phthalates are safe by Bill Durodié in **"Poisonous Propaganda: Global Echoes of An Anti-Vinyl Agenda"**. Durodié also gives considerable coverage of the various disturbingly unscientific methods and initiatives that environmental pressure groups are undertaking to compel governments to act against phthalates and PVC without the necessary evidence to support their decisions.

In any case it must be considered irresponsible policy to implement a ban on the basis of 'potential' effects. We must wait for the relevant studies to be complete before passing judgement on phthalates.

The Considerations (Green Paper page 15, question 2)

We believe there is no case for banning the use of plasticisers as there is no scientifically recognised reason for doing so.

There is no real alternative to phthalates in terms of health and safety performance, and they have been used for 50 years in food and healthcare applications without any harm to health. In avoiding a chemical, we have to ensure that the alternatives are sufficiently well understood and provide a higher measure of safety.

Industry is committed to supporting the Risk Assessments being carried out at the present time, indeed plasticisers producers are playing a big part in contributing to these studies. We must await the results of further scientific research before legislating against phthalates as a knee-jerk reaction.

3. Waste Management

Considerable emphasis is placed on this issue in the Green Paper. There is little justification for PVC-specific legislation regarding waste management, particularly as all materials both natural and synthetic should be put under the same level of scrutiny as part of a more comprehensive waste strategy. Indeed, the recent publication of '**An Evaluation of PVC Using The Natural Step Framework**' underlines the point that serious challenges face all materials and that these need to be addressed scientifically and not on the basis of single political issues.

The Considerations

3.1 Mechanical Recycling (Green Paper page 21, question 3)

A system of recycling must be sustainable if it is to justify its *raison d'etre*. It must be possible therefore for PVC waste to be easy to identify, easy to collect, easy to sort, sufficient quantities must be available, and there must be a market available for recycled material at a competitive level.

The recycling record of PVC must be put in the broader context of the material's extremely long life span. Recycling tonnages are modest because PVC products last so long and there simply isn't enough waste feedstock yet to input into the recovery and recycling process. When sufficient waste becomes available, the industry will have the technology to recycle them in commercially viable and sustainable schemes - in fact technology of this kind is already emerging.

Standards for recycling and collection would obviously be welcome but they would have to be carefully formed in a way that does not have a detrimental effect on the end product performance through the amount of recyclate being used.

Whilst we would gladly accept introduction of recycling standards and collection schemes, we feel that calculations of recycling potential generally fail to take account of current legal obligations. The only recycling targets in existing regulations are for packaging materials (and pending for End-of-Life Vehicles and Electric/Electronic applications), and so it is perfectly understandable that PVC recycling figures are low, as PVC plays only a minor role in these areas, if only in terms of collectable tonnages.

It also needs to be recognised that there are different arrangements for recycling across Europe and this will obviously have a bearing on this issue. Any type of Europe-wide scheme whether voluntary or regulatory needs to take into account the different activities that take place in different parts of Europe and the effect this has on the logistics involved, which also vary greatly.

What appears to be more puzzling is why there should be PVC-specific recycling initiatives at all. Although plastics must be separated prior to recycling, there is no special reason to legislate or prioritise the separation of PVC from waste streams.

In some cases marking plastics would facilitate sorting and recycling and this is a recommendation of the **Packaging and Packaging Waste Directive (94/62/EC)** and the forthcoming **End-of-Life Vehicles Directive**. On marking, in particular, there is no need whatsoever for a specific requirement for PVC to be marked.

The **Voluntary Commitment** agrees to recycle at least 50% of the collected available quantities of PVC pipe and fittings, and at least 50% of the collectable available quantity of PVC window profile waste by 2005. There is already a high level of conversion efficiency for in-house recycling of PVC fabrication waste. These can be regarded as highly challenging targets, particularly when the recycling levels of alternative materials in comparable applications are considered.

In any case, if, as the Green Paper says, PVC recycling is economically viable then it will happen without any legal pressure. This suggests that the most effective way to reach the objective of an increase in PVC recycling is to support and continue to develop initiatives such as the **Voluntary Commitment**.

3.2 Recycling PVC waste containing stabilisers

(Green Paper page 21, question 4)

It seems illogical to dismiss the recycling potential of PVC containing cadmium and lead. This would eliminate the possibility of recycling over five and a half million tons of waste from the construction sector in Europe.

Assuming this recycling potential was dismissed, the new production of the equivalent weight of PVC would use a considerable quantity of oil, a resource which could be saved if the construction waste was recycled. Denying the

use of these large quantities of waste is not in keeping with the sustainability themes that the Green Paper should be promoting.

Thus, we consider there to be no case for legislating against mechanical recycling of PVC waste with heavy metals.

3.3 Chemical Recycling (Green Paper page 24, question 5)

Virtually no mention is made of the Industry's **Voluntary Commitment** to increase chemical recycling initiatives in the next 10 years.

As part of this, PVC producers have committed to investing € 3 million by 2001 in a pilot plant, with the objective to recover the hydrocarbons and chlorine. Depending on the results, which are expected sometime in 2002, a decision regarding the building of a plant on a commercial scale will be made.

We feel that there is no case for legislating for specific targets for particular forms of recycling as this might restrict industry innovation in adapting new and improved systems. One example of this is the new 'Vinyloop' technology developed in Italy.

3.4 Incineration (Green Paper page 30, question 6)

An integrated waste management approach cannot dismiss the option of incineration since non-recyclable waste will still be energy-rich. Diverting such waste to landfill would not only mean moving material to a less sustainable and less clean stream but would also result in a loss of energy recovery. In any case, the separation of non-recyclable PVC waste is not cost-effective.

There is a cost involved for each incinerated material. Whilst PVC may incur larger costs for disposal of final neutralisation residues, it must be remembered that the heavy chlorine element of the material would account for this, and hence, the environmental costs of carbon dioxide emissions would be significantly less than those compared with other materials. On balance, in terms of sustainability, it must surely be better for the salts to be returned to the earth, than to produce twice as much CO₂.

The Green Paper concentrates heavily on Municipal Solid Waste (MSW) in its evaluation of incineration, and it is difficult to understand why only fleeting reference is given to the use of plastics waste in cement kilns. This represents an efficient use of the waste since the ash issue is removed as it becomes incorporated into the finished cement. Whilst limits obviously apply, the incineration of PVC waste, amongst other plastics waste, in cement kilns should be valued as a highly important technology which cannot be ignored.

The Association of Plastics Manufacturers in Europe (APME) has conducted studies at the Würzburg incineration plant in Germany, rather than simulated laboratory conditions. The results showed that increasing the general content

of plastics waste, which included PVC, did not produce any quantifiable increase in the production of dioxins. All the recorded emissions were well within the regulatory limits. (**'Energy Recovery Through Co-combustion of Mixed Plastics Waste and Municipal Solid Waste'**, Dr. Frank E. Mark, Dow Chemical Europe, for APME, June 1994). In any case, chlorine is present in so many other non-PVC substances found in incinerators which means the presence or absence of PVC in an incinerator will have little bearing on the amount of chlorine found there.

Sufficient research has been undertaken to demonstrate that it is the operating conditions of the incinerator that the majority of dioxins emissions is dependent on, and not the content of PVC waste itself, (**"Relationship Between Chlorine in Waste Streams and Dioxin Emissions from Combustors of the ASME"** H.G. Rigo et al ASME 1995). There are technological developments underway that could contribute further sustainability by recycling and/or minimising neutralisation residues. The European PVC Industry has pledged to develop such methods in the **Voluntary Commitment**.

3.5 Landfill (Green Paper page 32, question 7)

The findings of the study on which the Paper's authors base the conclusions regarding landfill are not in keeping with the wealth of scientific data available for this issue. Indeed, the ARGUS / Rostock study has not been recognised scientifically, as real-life landfill conditions were not simulated in the tests. There could be no justification for legislation or regulation on the basis of these results.

The abundance of evidence to date suggests that landfilling PVC waste is environmentally safe. A study by the Chalmers University of Technology in Sweden, concluded that rigid PVC does not degrade in landfill, (**T. Hjertberg, 'Degradation of PVC in Landfills - a theoretical evaluation', Sweden 1995**). This PVC will remain inert in landfill, and there is no evidence to suggest that such PVC waste would be a source of any toxic substances under landfill conditions.

4. Conclusion - A Horizontal Strategy on PVC

The Considerations (Green Paper page 34, question 8)

Based on the analysis above, we believe that legislation regarding one material is improper without having investigated its alternatives to the same degree.

We feel that the Green Paper concentrates too heavily on the Waste Management aspects of PVC. A horizontal strategy would have to take all plastics and their alternatives into account and would have to analyse the whole life-cycle of each application.

To introduce a policy of substitution would be irrational since materials have been readily substituted for years for economic reasons such as price and product features. The decision to use PVC in most applications is down to it being the best available material to use through its array of useful properties:

- Lightweight
- Energy efficiency (57% based on salt)
- Durability and resistance to weathering
- Versatility - it can be rigid, flexible, transparent, opaque, coloured
- Susceptibility to a range of recycling and recovery techniques
- Safety
- Bio-compatibility
- Taint free
- Inert properties
- Ease of processing
- Design freedom
- Fire safety
- Cost effectiveness

For example, substitution of PVC could not realistically be applied unless it could be guaranteed that there was improved performance, and that this could be done at a better price with better waste management. PVC has been tried and tested for more than 50 years, the same cannot be said for every alternative. Is it responsible public policy to create a business environment where recourse to alternatives to PVC is sought without the alternatives having been equally studied or understood?

In terms of a horizontal strategy, the European PVC Industry has already made a **Voluntary Commitment** to the sustainability of the material which includes continuous optimisation of the manufacturing processes, addressing the additives issues, increasing recycling and financing the scheme.

The **Voluntary Commitment** is a highly constructive and cost-effective approach. It encourages a higher level of ownership in industrial circles, and can be implemented in such a way as to allow close public scrutiny of achievements.

It is on such a voluntary level that a horizontal strategy is best based since it allows for greater flexibility in terms of developing new technology, meeting current and future legal requirements, and facilitating a dynamic industry in the 21st century socio-economy.

The British Plastics Federation
October 2000

Message from Carl Hervier :

Je suis pour le PVC car c'est une matière plastique dont la fabrication est bien maîtrisée et qui répond à des exigences en matière de sécurité, hygiène et environnement très stricte.

Le PVC est un matériau recyclable par le biais de techniques mécaniques et bientôt chimiques (pilote en cours).

Imaginez un monde sans PVC ! (Même Greenpeace en subirait les conséquences : zodiac en contreplaqué marine ?)Le PVC est omniprésent dans notre vie de tous les jours...Qu'il s'agisse de la construction (menuiseries plastiques, revêtements de sol, papiers peints, tuyaux, ...), de l'électricité (câblages, boîtiers...), de l'emballage, de l'automobile, du textile (bâches..), de la médecine...

Le PVC est une matière plastique économique car elle ne demande pour sa fabrication que 43% de pétrole et 57% de sel contrairement à d'autres matières plastiques, dérivées à 100% du pétrole...

La question que l'on peut se poser : à qui profiterait l'extinction du PVC ?

Carl Hervier

Message from Cindy Granier:

Thank you very much for the opportunity to comment on the European Community's Green Paper on PVC. As an employee of Occidental Chemical Corporation, a manufacturer of PVC resin in North America, I am concerned about the potential impact of the European Union's actions on international trade, my company's business, our customers' business and my own job.

European plastics waste management policy should include all the options: landfill, recycling and incineration. Sometimes separation of plastic applications is not possible or cost-effective. In this case, incineration recovers the energy content of plastic materials.

Each material has its own incineration cost. Even though the neutralization residues' disposal costs appear to be significant for PVC, PVC emits less CO₂ when combusted. Total life cycle costs may be comparable to those of other materials. Before deciding to divert one material from incineration, all material specific costs--operating and environmental--have to be taken into account. Moreover, new technologies allow minimization and/or recycling of neutralization residues. The European PVC Industry has committed to research such technologies.

The European Union's Green Paper rightly notes that research and regulation the world over shows that design and operation of incinerators is the most important consideration for dioxin minimization. Chlorine/PVC content is, at most, a minor contributor.

PVC is a modern material yet it has significant history. Resin, additive and product technology is improving continuously; however, the long track record of safety and utility of vinyl should not be ignored. The European industry, through its voluntary commitment is working to address the substantive issues outlined in the Green Paper. This is a progressive approach to environmental concerns, and should be the basis for European policy on PVC.

Thank you,
Cindy Granier

Message from Mr Daily :

Monsieur,

Je suis salarié de la société ALPHACAN située à La Celle St Cloud (France) et spécialisée dans la transformation de matières plastiques. Je me sens concerné par le Livre Vert de la Commission. J'ai étudié attentivement les points pour et contre de ce document, ainsi que ceux explicités dans l'Engagement Volontaire des producteurs de PVC.

Je souhaite faire les commentaires suivants :

- ✓ Le PVC est un des matériaux synthétiques les plus anciens. Il a su, par ses performances, rester l'un des plus utilisés.
- ✓ Il offre une valeur ajoutée importante à la communauté, par ses nombreuses applications telles que : équipement médical, emballage pharmaceutique, revêtement de sol pour la maison et l'hôpital, châssis de fenêtres sans entretien et d'excellente qualité d'isolation thermique, tubes pour la distribution d'eau alimentaire sans perturber ni le goût ni l'odeur et assurant leur fonction pendant plusieurs générations, tubes pour l'évacuation des eaux usées parfaitement étanches et résistants à la corrosion, etc.
- ✓ Notre société fabrique des tubes et des profilés pour fenêtre depuis plus de 40 ans. Nos produits sont reconnus comme sûrs dans leurs applications. Des tubes extraits de notre site allemand de Bitterfeld, âgés de plus de 40 ans, ont passés avec succès les tests de résistance appliqués à nos productions actuelles.
- ✓ Des progrès très importants ont été réalisés dans nos usines et celles de nos fournisseurs pour réduire l'impact des rejets sur l'environnement. Tous nos rebuts de fabrication sans exception sont recyclés dans nos produits (zéro déchet) et nous recyclons même des produits régénérés en externe pour des fabrications particulières. En 1999, nous avons ainsi retransformé plus de 4 000 tonnes de PVC en provenance de produits extérieurs à nos propres fabrications.
- ✓ Quel que soit le matériau considéré, les produits, après leur première vie, deviennent déchets. Le recyclage du PVC progresse dans tous les pays d'Europe, et de nouvelles technologies sont en cours d'expérimentation pour récupérer le PVC même fixé sur d'autres matériaux (cuirs artificiels par exemple). Ceci permet actuellement de régénérer de nombreux types de déchets et aux générations futures de traiter convenablement les produits PVC en fin de vie.
- ✓ De nombreuses questions évoquées dans le Livre Vert s'appliquent à tous les matériaux et pas seulement au PVC. Pourquoi la Commission se focalise-t-elle sur le PVC ?
- ✓ L'importance de l'industrie du PVC, y compris les petites et moyennes industries transformatrices, est considérable en Europe.

C'est pourquoi je soutiens l'Engagement Volontaire de l'Industrie de PVC qui a été présenté dans nos usines.

En conclusion, je souhaite que le PVC soit traité comme tout autre matériau synthétique ou naturel. Je demande à la Commission de retenir les propositions de l'Engagement Volontaire : ce dernier permet une approche réaliste pour améliorer plus encore la situation écologique et économique du PVC.

Message from Mr Deyplasa:

Estimado Sr. Schulte-Braucks

Con mucho interés hemos leído el “Libro Verde de la problemática de PVC para el medio ambiente” en <http://www.europa.eu.int.comm/environment/pvc/index.htm>.

Es para nosotros de gran interés que la temática del PVC en su gremio, se acabe lo más pronto posible y según nuestro respecto que sea tratado positivamente. Otras demoras serán negativas para nuestro comercio.

A continuación comentamos algunas preguntas sobre el libro verde.

Especialmente comentar del capítulo 4.2 “Reciclado de materia prima” de la pregunta 3.

Pregunta N^o 3” ¿Conque catalogo de medidas se podría leer la meta de un mas fuerte consumo del reciclado del PVC?”

Acogemos con interés las metas de reciclado de la rama de PVC. Por ello recomendamos también este punto “compromiso voluntario” y apoyamos las metas de reciclaje del libro verde así como sobre el punto 2.3, compromiso voluntario de las cuotas de meta: 25% para el año 2003 y un 50% para 2005, basándose en la cantidad disponible de materia antigua de PVC registrada.

Como en el tema del valor de los recortes de PVC, también realizaremos en un futuro las arriba mencionadas metas. Las experiencias positivas de la rama de la F.R.E.I -Fenster-Recycling-Initiative hacen que estemos convencidos del alcance de dichas metas.

De las preguntas 5,6 y 7 del Libro Verde.

Pregunta N^o 5 “¿Qué catalogo de medidas sería el más conveniente para el reciclado químico del residuo del PVC?”

Pregunta N^o 6 “¿Qué catalogo de medidas podría solucionar mas efectivamente el problema de la cremación del residuo de PVC?”

Pregunta N^o 7 “¿Son con vistas al deposito de residuo de PVC medidas especiales convenientes? ¿Sí Si, cuales?”

No vemos para nuestro producto ninguna necesidad de acción. Sobre la pregunta 7 queremos destacar que los perfiles de residuo no desprenden agua contaminada.

Sobre la pregunta 8

Pregunta N^o8: “¿,Qué instrumentos son los ideales para el desarrollo de una estrategia horizontal sobre el PVC?” ¿Debería de haber para algunos productos una política de substitución? Sí Si, como?

Nuestra opinión sobre el compromiso voluntario de la rama del PVC de la estrategia horizontal ideal para la responsabilidad y el buen manejo con las materias de PVC para los próximos decenios. No vemos ninguna necesidad ni de aprovechamiento el desarrollo de siguientes estrategias.

El material de PVC que esta reconocido como favorable por su precio/cantidad, es un producto que esta en la cima con respecto a todos los materiales disponibles. La justificación del balance económico independiente sobre materiales de ventanas y el conocimiento a mejorar la eficiencia económica. Una política de subsituación, esto significa una estrategia para la sustitución del PVC, es por ello no conveniente y es peor para la ecología y economía de la situación general de Europa.

Para terminar, les queremos solicitar que lleguen pronto a un acuerdo sobre el análisis horizontal de PVC en el sentido del compromiso voluntario de la rama de PVC. Esto nos aparece y nos lo solicitan tanto como consideraciones científicas así como de demandas económicas de nuestro negocio.

Message from Mr DIMiceli :

Sono un funzionario della Soc: Adriplast di Monfalcone e Vi scrivo per sottolineare la mia adesione a questa iniziativa, dopo aver attentamente analizzato e discusso i contenuti del Libro Verde sulle tematiche ambientali del PVC e considerando che:

IL PVC E' UNO DEI MATERIALI SINTETICI PIU' IMPORTANTI.

IL LIBRO VERDE NON SOLLEVA ALCUNA PROBLEMATICIA SIGNIFICATIVA IN RELAZIONE AL PVC

LA GESTIONE DEI RIFIUTI NON E' UN PROBLEMA SPECIFICO DEL PVC MA UN TEMA GENERALE DELLA SOCIETA' NEL SUO INSIEME.

IL PVC OFFRE ALLA SOCIETA' UN ENORME VALORE AGGIUNTO.

I DATI RELATIVI ALL'INDUSTRIA DEL PVC SONO ESTREMAMENTE SIGNIFICATIVI IN TUTTA EUROPA CON 530.000 ADDETTI IN 20.000 SOCIETA'. L'IMPATTO ECONOMICO A LIVELLO EUROPEO DELL'INTERA INDUSTRIA DEL PVC E' NOTEVOLE.

IL FALLIMENTO DELLA RICERCA DI POTENZIALI MATERIALI ALTERNATIVI AL PVC NON DOVREBBE PORTARE ALLA DISCRIMINAZIONE CONTRO IL PVC..

Premesso ciò mi permetto d'invitare caldamente la Commissione Europea a sostenere L'Impegno Volontario dell'Industria. CHIEDO CHE IL PVC VENGA TRATTATO AL PARI DI QUALSIASI ALTRO MATERIALE.

La Commissione deve inoltre riconoscere e appoggiare l'impegno dell'Industria nel garantire un futuro sostenibile per i propri prodotti.

Distintamente saluto.

Messages from Dominique Jadoul

*A l'attention de Monsieur KRAMER
Directeur du Département Environnement
& de Monsieur SCHULTE-BRAUCKS –
Directeur du Département Chimie*

Monsieur

1. Concerne : Je suis pour les chassis en PVC qui protègent l'environnement

Les chassis en PVC sont un excellent produit. Tout d'abord l'utilisation du PVC au lieu du bois permet de contribuer à lutter contre la déforestation. Ensuite à l'entretien cela permet d'éviter l'usage de nombreux produits toxiques (produits de traitement du bois, peintures, vernis, ...). Finalement en terme de qualité d'isolation, les performances sont remarquables ce qui permet d'économiser de l'énergie ce qui signifie une moindre utilisation des matières premières énergétiques, une diminution des émissions de gaz polluants, une diminution de nos achats d'énergie primaire.

Last but not least : on ne passe plus une partie considérable de ses loisirs à mettre en peinture ou traiter les boiseries extérieures de son habitation.

2. Concerne : Je suis pour le PVC car il utilise peu de pétrole

Le PVC est la seule matière plastique qui consomme peu de pétrole. En effet pour 1 kg de PVC, moins de la moitié provient du pétrole, le reste provient de sel de cuisine qui est disponible en très grande quantité et avec des réserves importantes réparties sur la surface de la terre. Les autres plastiques sont eux dérivés à 100% du pétrole. Cette propriété est un avantage écologique important car elle permet une moindre utilisation des ressources pétrolières qui sont comptées et qu'il est crucial de préserver pour les générations à venir. De plus dans le contexte actuel de crise pétrolière, je pense que le PVC est une réponse adéquate à une moindre dépendance vis à vis de l'or noir, ce qui en terme de politique européenne signifie également une moindre dépendance économique et politique par rapport aux pays exportateurs de pétrole.

De plus, lorsque le PVC est utilisé comme matériau pour la fabrication de chassis et autres objets à durée de vie plus ou moins longue, le problème de son recyclage est minimisé car inerte en tant que tel.

3. Concerne : Je suis pour le PVC car le PVC est recyclable

Le recyclage du PVC est déjà une réalité. Aujourd'hui les installations existantes de recyclage ne tournent pas à pleine capacité par manque de matière première. Le problème se situe donc plus spécifiquement au niveau de la collecte et du tri sélectif des déchets. L'industrie développe pour le moment des nouveaux procédés qui permettront de mieux séparer et de recycler plus facilement le PVC. La problématique du recyclage n'est pas un problème spécifique au PVC, mais plutôt un

problème de société. Je pense que les démarches en ce sens doivent encore progresser largement dans les mentalités et être encouragées par les pouvoirs publics locaux, nationaux et européens.

4. Concerne : Je suis pour le PVC car il sauve des vies

Aujourd'hui toutes les poches de sang sont fabriquées en PVC souple. Cette application ne peut être couverte par les autres plastiques avec le même degré de sécurité et de confort pour les patients. En effet seul le PVC résiste aux températures élevées qui sont nécessaires à la stérilisation des poches de sang. Abandonner le PVC reviendrait à mettre la vie des patients en danger !

Etant moi même, depuis plus de vingt ans, donneur de sang régulier, cette application du PVC est pour moi la garantie d'une utilisation optimale des dons effectués par des milliers de donneurs anonymes.

Dominique Jadoul

Message from Elizabeth Gobeil :

Dear Mr. Krämer and Mr. Schulte-Braucks,

As an employee of a corporation focused on improving lives through modern medicine, I believe that PVC makes a significant contribution to furthering this cause and I implore you not to let unsound science and demagoguery restrict the use of this important product. PVC products have been used in the world's healthcare system for more than 50 years in making such crucial medical products as syringes, tubes and catheters, inflatable splints, oxygen tents, disposable medical equipment...and the list goes on.

No other product on the market offers the performance and safety provided by PVC.

As you consider the merits of PVC, please note that PVC producers have continuously invested a lot of money to improve production safety and to reduce the impact on environment and health. For instance:

- * An independent audit has shown that 88% of the European PVC "suspension process" plants (85% of the total PVC production), and among them all Solvay PVC sites, already comply with the ECVM Charter for PVC production signed in 1995.
- * PVC manufacturing complies with the most rigorous regulations regarding safety and the environment, including the "Best Available Technology for PVC production" adopted unanimously by all 25 member countries of the Commission for Protection of the North Sea and the Atlantic (OSPARCOM), applicable by 2003.
- * The ECVM producers have signed a second charter for the PVC "emulsion process" production.

Also, please note that recycling of PVC products is economically and ecologically feasible. As a part of its Responsible Care engagement, SOLVAY is the leader in PVC recycling, for instance:

- * in the Netherlands, Pipelife recycles used pipes and bottles into new pipes.
- * SOLVAY has invented the VINYLOOP® process for recycling PVC composites (electric cables, tarpaulins, floorings, ...). We are now building in Italy the first VINYLOOP® industrial plant. It will start operating next year. There may be a further 10 units built in Europe in the coming years.
- * In the frame of an ECVM project, SOLVAY is building a chemical recycling unit recycling PVC into its raw materials (feedstock recycling <graph.htm>).
- * SOLVAY, together with all the European PVC industry, has signed a Voluntary Commitment <Voluntary_Commitment.htm> setting clear objectives for continuous improvement in production and recycling; for instance, it commits to recycle more than 50% of the waste in major applications such as window frames and pipes.

Many other profitable companies also actively recycle post consumer PVC waste, for instance, in Belgium, Rulo is a fast growing PVC recycling business. Also, in Germany,

Veka operates a large plant manufacturing 100% recycled window frames, which can recycle up to 300 PVC window frames per hour.

Despite intensive research on the subject, PVC remains irreplaceable. It is the responsibility of everyone in the healthcare community to be stewards of better medicine and better health, and, thus, to support the continued production of PVC in its many medical capacities.

Thank you for taking my comments into consideration.

Respectfully,
Elizabeth Gobeil
Senior Representative, Government Affairs
Solvay Pharmaceuticals, Inc.

Message from Elplast sas :

Siamo produttori di numerosi articoli in p.v.c. rivolti a svariati settori quali, ad esempio:

- L'INDUSTRIA
- L'UFFICIO
- IL PROMOZIONALE
- SCOLASTICO

Temiamo che la campagna per la messa al bando del PVC, frutto di strumentalizzazione e mala informazione, metta in serio pericolo la nostra azienda e i dipendenti che vi sono impiegati (n. 11 con la previsione di aumento).

Vi preghiamo di valutare con cautela la situazione che si è creata e gli innumerevoli problemi che una decisione errata potrebbe causare.

In fede,

Elplast sas
S. Raffaele Cimena (TO) - ITALIA -

Paris, la Défense le 7 novembre 2000

Commission Européenne
DG ENV & DG ENTR

À l'attention de Monsieur KRAMER, Directeur du département Environnement
Monsieur SCHULTE-BRAUCKS, Directeur du département Chimie

Messieurs,

Nous transportons régulièrement les différents composants du PVC et nous pouvons certifier le niveau de sécurité très élevé qui est appliqué sur ces produits.

D'autre part, nous constatons régulièrement que les unités de production de PVC sont des installations sécurisées ou les procédures sont doublées, voire triplées, les normes appliquées sont volontairement très strictes et font l'objet de contrôles réguliers par des experts.

Nous sommes pour le PVC car il représente un matériau fiable et économique que nous côtoyons couramment dans la vie de tous les jours.

Nous vous prions d'agréer, Messieurs, l'expression de nos sentiments distingués.

ERMEWA-SATI
LE DIRECTEUR COMMERCIAL
G.BROSSIER



Message from Estefania Blount:

Director of Environment

ISTAS (Instituto Sindical Trabajo, Ambiente y Salud)

Trade Union Institute for Work, Environment and Health

COMMENTS FOR PUBLIC CONSULTATION ON PVC

PRODUCTION

1. During the PVC manufacturing process several toxic chemicals are involved that represent a threat to the health of workers and society as a whole, such as: chlorine, 1,2-dicloroethane, MVC, lead, cadmium and phtalates.
2. The use of chlorine during the manufacturing process implies a risk factor that remains throughout the entire life cycle of the product.
3. The manufacture, manipulation, transportation and storage of a carcinogenic substance (MVC) represents a high level risk that should be prevented.

USE OF PVC

1. The migration of different substances, including MVC, poses a risk during certain applications of PVC. The US FDA has banned the use of certain types of packaging for a number of applications due to the possibility of MVC migration to food products.
2. The softeners may constitute up to 25% of the weight of some PVC packaging materials. The high solubility of phtalates as well as other softeners, particularly when in contact with fatty tissues, results in a high migration rate constituting a risk to users and consumers.
3. One of the most recent concerns regarding high exposure to phtalates regard their capacity to act as endocrine disruptors.

REUSE

1. The use of PVC as a packaging material represents an important problem with respect to compliance of the national legislation on packaging and packaging waste (Ley 11/97) which establishes a goal of 10% reduction, since PVC packaging is

designed to be used a single time and presents few options for reuse. The existence of alternative materials for PVC packaging with better opportunities for reuse and recycling (cardboard, glass, metals...) would justify the substitution of this type of PVC application. Other PVC applications (floors, office supplies, windows...) have a longer life and present similar reduction opportunities as the other materials.

2. Besides some problems that have been identified in the recycling process of PVC wastes, this option should be maximized in order to avoid any worse implications for the environment or society.

LANDFILLING

1. Taking into consideration that more than 81% of the PVC waste goes to landfills, and the slow degradation rate of this material (which is beneficial during its use but hazardous as a waste), PVC wastes are very problematic. The chemical/physical degradation of PVC begins with the dehydrochlorination which implies the formation of hydrochloric acid. There may also be a tendency to leach the heavy metals contained in PVC, particularly lead and cadmium.

INCINERATION

1. PVC incineration implies different problems that affect both the environment and public health. The most important ones are the emission into the air of hydrochloric acid, heavy metals and dioxins and furans.
2. As shown in many studies referenced in the document, PVC plays a fundamental role in the formation of dioxins and furans during incineration of wastes.
3. The contribution of incinerators to the background levels of dioxins and furans is significant and in certain countries the main source.
4. The IARC concluded after revising all the scientific data that the 2,3,7,8-tetrachlorodibenzo-para-dioxin causes cancer in humans. It is very possible, though, that the most serious threat of dioxins is their endocrine disrupting activity.

ALTERNATIVES

1. Overall, there are a number of alternatives to PVC which imply less risks to the environment and to public health. It is also true that not all of the alternative options are always feasible. Research still needs to be done to overcome these technical,

economic, environmental or health limitations existing in some of the alternative materials. But in the majority of the cases substitution of PVC could begin.

EMPLOYMENT

1. In studying the current tendencies of PVC substitution in different countries and by different companies, which will continue to grow as even more evidence of the risks is published, a reduction in the demand of this material may be anticipated. Yet, when evaluating employment losses from a global perspective and considering the interests of workers from all sectors, one cannot exclusively the jobs of one sector and underestimate the potential for job creation in others if PVC alternatives are developed. With this global view of employment, we understand the overall balance could be even a positive one. An example would be a greater demand for wooden window frames, which require more manpower during their manufacture and more maintenance throughout their lifetime, or the use of glass bottles which would create more jobs through the activities of collection, reuse and recycling.
2. In any case, it is necessary to actively participate from all social sectors to ensure that the necessary environmental and health improvements take place without resulting in negative repercussions in the employment. A delay in the planing of the substitution of PVC could have in the future a negative effect on employment. The discussion and elaboration of an ordered and progressive transition of the PVC industry should be carried out in a transparent and participatory way involving all the social agents.

Message from Fabrice GIRAUD

The PVC Green Paper acknowledges that PVC is recyclable and already well recycled especially in pre-consumer uses. There are therefore good reason to consider that post-consumer recycling will be organised and developed just like other material such as glass or paper.

According to the horizontal studies on which the Green Paper is based, PVC recycling is economically and ecologically feasible, provided that collection schemes and recycling installations are developed. As for any other material, the most important step is to organise PVC waste collection and sorting.

Already many profitable industries actively recycle post consumer PVC waste:

- * in the Netherlands, Pipelife recycles used pipes and bottles into new pipes.
- * In Belgium, Rulo has a fast growing PVC recycling business.
- * In Germany, Veka operates a large plant manufacturing 100% recycled window frames
- * In Italy, SOLVAY is building the first VINYLOOP® industrial plant for recycling PVC composites (electric cables, tarpaulins, floorings, ...).

It will start operating next year and there may be a further 10 units built in Europe in the coming years.

- * In the frame of an ECVM project, SOLVAY is building a chemical recycling unit recycling PVC into it's raw materials (feedstock recycling).
- * When recycling is not a viable option, for health or hygiene reasons (in the case of medical waste or small food packaging films for example) or for economic reasons, clean incineration with energy recovery is a good option. Our NEUTREC® process for smoke cleansing is one of the best ones ; it's residual salts are recycled as a raw material for Soda production, using our RESOLEST® process.
- * SOLVAY, together with all the European PVC industry, has signed a Voluntary Commitment setting clear objectives for continuous improvement in production and recycling; for instance, it commits to recycle more than 50% of the waste in major applications such as window frames and pipes.

To me, this consideration are great arguments in favour of PVC, which is a product that is criticised all too often.

And I say YES to PVC !

Fabrice GIRAUD
Centre Etudes & Recherche
Usine de Dombasle
SOLVAY CARBONATE FRANCE S.A.

Message from Forbo-Sarlino s.a. :

Objet : DEBAT PVC

A l'attention de Messieurs Schulte-Braucks et Krämer

FORBO-SARLINO (France) est heureux de pouvoir participer au débat que la commission a lancé sur l'utilisation du PVC, et vous remercie de lui offrir la possibilité d'apporter son point de vue.

Nous sommes producteur de revêtements de sols à Reims, et filiale du groupe européen Forbo. Notre société Forbo-Sarlino a entre autres une activité de producteur de revêtements de sols acoustiques qui intègrent des matières premières à base de PVC, et une activité commerciale de vente en France et à l'étranger de ces produits.

Au sein de notre entreprise ou au sein du groupe Forbo, notre société est activement engagé dans des programmes permanents de développement et d'investissements afin d'améliorer la protection de l'Environnement tant au stade de la fabrication qu'à celui de l'utilisation de ses produits.

En outre, dans le but de développer le recyclage des revêtements de sols PVC en fin de vie, le Groupe Forbo a créé la société AgPR en association avec les producteurs de PVC et les fabricants de revêtements de sols PVC.

Nous souhaiterions apporter nos commentaires aux questions précises posées.

Pour la question N°1, nous tenons à vous faire savoir qu'il existe des solutions satisfaisantes de remplacement des sels de cadmium et de plomb pour la stabilisation des revêtements de sols. A ce titre, nous n'utilisons plus les dits produits et avons intégré des solutions de substitution depuis plus de 20 ans.

Pour la question N°2, nous voudrions vous faire remarquer que les phtalates ont depuis toujours été utilisés comme plastifiants du PVC dans les revêtements de sols sans, à ce jour, de démonstration de risque toxique scientifiquement prouvée. Forbo-Sarlino suit avec la plus grande attention les études Européennes en cours et mettra en oeuvre de manière volontaire les éventuelles substitutions qui pourraient s'avérer utiles. Nous avons d'ores et déjà étudié d'autres familles chimiques. Il convient toutefois de préciser que ces familles chimiques sont actuellement moins bien connues que la plupart des phtalates au niveau de leur impact environnemental et de leur toxicité éventuelle.

Pour la question N°3, en ce qui concerne le recyclage, Forbo-Sarlino a depuis plusieurs années, mis en place le recyclage intégral de ses propres rebuts de fabrication. Quant à la collecte et au recyclage des matériaux en fin de vie ainsi que des déchets de pose des produits, nous souhaitons faire référence aux applications engagées en Allemagne, au travers de l'AgPR. Cette société a pour but le recyclage mécanique des déchets de fin de vie préalablement collectés. Cette collecte à grande échelle, pour nos revêtements de sols comme pour les autres matériaux en fin de vie, conduit à des problèmes organisationnels qui ne peuvent être résolus efficacement qu'à travers une filière et dans la mesure où l'on pourra bénéficier d'une implication des pouvoirs publics et de la mise en place de moyens financiers très importants.

Pour la question N°4, il ne paraît pas souhaitable de prendre des mesures spécifiques sur les matières contenant du cadmium et du plomb, car ceci consisterait à rendre le recyclage plus compliqué et beaucoup moins efficace. On peut tout à fait admettre qu'au fil des années ce problème se résorbera de lui-même.

Pour la question N°5, le Groupe Forbo est engagé dans la construction d'une usine de recyclage chimique d'une capacité de 10 000 T/an.

Pour la question N°6, comme pour beaucoup d'autres produits l'incinération du PVC ne pose pas de problèmes environnementaux lorsque les gaz de combustion sont convenablement traités; la récupération et/ou la neutralisation de l'acide chlorhydrique sont des solutions acceptables au plan de la protection de l'environnement.

Pour la question N°7, nous sommes clairement opposés à la mise en place de mesures spécifiques sur les déchets de PVC souple en décharge, car celles-ci ne seraient pas justifiées. Il faut noter que les membranes d'étanchéité en PVC souple sont des barrières particulièrement efficaces aux polluants des décharges et qu'elles sont durables; ce qui confirme que l'hypothèse d'un risque lié au phénomène supposé de lixiviation des plastifiants ou autres additifs, est infondée et ne doit pas être pris en compte.

Par contre, s'il est naturellement souhaitable de réduire le volume des matériaux en fin de vie mis en décharge, il convient toujours de favoriser le recyclage ou l'incinération pour l'ensemble des produits PVC, comme pour les autres produits.

Pour la question N°8, Forbo-Sarlino est convaincu que rien, au plan écologique, ne justifie aujourd'hui une substitution du PVC dans les revêtements de sols.

Le PVC apporte dans cette application tout un ensemble de performances inégalées à ce jour. Nous poursuivons nos efforts pour améliorer constamment la qualité et la sécurité de nos produits, et pour assurer la protection de l'Environnement.

Nous espérons vivement que notre expérience de fabricant de revêtements de sols contribuera, par ces quelques réponses, à donner à la commission une vision objective d'un secteur de l'industrie du PVC en pleine évolution, en particulier par son développement technique et ses améliorations sur le plan environnemental.

Veillez agréer, Messieurs, nos meilleures salutations.

Forbo-Sarlino s.a.

Message from Mr Geist:

I am an employee of Occidental Chemical Corporation, a manufacturer of PVC resin in North America, and I am concerned about the potential impact of the European Union's actions on international trade, my company's business, our customers' business and my job. I am also grateful for the opportunity to comment on the European Commission Green Paper.

No specific regulatory measures are necessary with respect to mechanical recycling of lead- and cadmium-containing PVC waste. If such material is to be recycled, a closed loop system--that is, recycling articles into similar articles--should take priority. Heavy metals in PVC applications are integrated in the plastic matrix, and present no unusual risk.

PVC is a modern material. Resin, additive and product technology is improving continuously. Fabrication companies are also investing in the exploration of potential alternatives, as has always been done for any material; however, alternatives should be favored only if a complete comparative analysis demonstrates that they are better than PVC. More generally, the European industry, through its Voluntary Commitment is working to address the substantive issues outlined in the Green Paper. This is a progressive approach to environmental concerns, and should be the basis for European policy on PVC.

Thank you,

Message from Mr Giambrone, Doug Good, Mr Halverson:

Thank you very much for the opportunity to comment on the European Community's Green Paper on PVC. I am an employee of Occidental Chemical Corporation, A North American manufacturer of PVC resin. Since it could form the basis for European Union's regulation of PVC, I am concerned about the potential impact the Green Paper might have on international trade, my company's business, our customers' business and my own job.

I am particularly concerned about the study conducted on landfilling of PVC. The European PVC Industry challenges the conclusions of the EU study, as well they should. The extreme temperature used to accelerate aging of materials in the study undoubtedly affected the results. Other independent studies closer to real landfill conditions have concluded that PVC in landfill, including plasticized applications, is environmentally safe.

There is enough scientific research available on this topic. PVC can be safely landfilled, and no specific regulatory measures should be considered at present.

PVC is a modern material yet it has significant history. The European industry, through its Voluntary Commitment is working to address the substantive issues outlined in the Green Paper. This is a progressive approach to environmental concerns, and should be the basis for European policy on PVC.

Thank you,

Message from Mr Giovanelli, Mr Collin:

Since the European Community's Green Paper could form the basis for European Union's regulation of PVC, I am pleased to be invited to comment on aspects of it. I am an employee of Occidental Chemical Corporation, a manufacturer of PVC resin in North America and I am concerned about the impact such action might have on international trade my company's business, our customers' business and my own job.

Common short-life applications such as bottles and plastic containers are the most frequently recycled items; PVC is unfortunately less commonly used in those items than other plastics. Consequently, the greatest investment in recycling infrastructure goes to increase the recycling rates of packaging as a whole, and thus mainly the recycling of materials other than PVC.

As a material predominantly used in long-life applications, PVC will have special recycling challenges. Whether these challenges mean that PVC will have a significantly lower recycling rate than other products-when all end-use applications are considered--is not apparent from the horizontal studies.

New recycling technologies have been commercialized recently by individual companies as part of the industry's voluntary approach to PVC policy. They will increase the potential for recycling. Voluntary action is a progressive way to solve modern problems of modern materials like PVC. It can take into account the different ways in which materials are used in different European countries and still accomplish recycling goals. Industry's voluntary approach should form the basis for European Union's policy on PVC.

Thank you,

Message from Mr Griffiths :

Thank you very much for the opportunity to comment on the European Community's Green Paper on PVC. Since it could form the basis for European Union's regulation of PVC, I am concerned about the impact the Green Paper might have on international trade, my company's business, our customers' business and my own job.

My company, Occidental Chemical Corporation, a manufacturer of PVC resin is well aware of the opportunities and costs associated with mechanical recycling. I believe the European PVC Industry is correct to favor end-use specific, not material specific, recycling targets. As with any other material, PVC has to do its part-no more and no less-to achieve agreed upon targets. Setting targets and organizing recycling by end-use application is the most rational and cost effective approach.

Mechanical recycling is appealing and can make a significant positive environmental contribution; however, to be viable economically candidates for recycling must be easily collected and sorted. They must be available in significant quantities and require minimum transportation. These needs apply to all plastics, and in fact, all materials.

Responsibility for satisfying these conditions can be shared by industry and government. For PVC window frames and pipes, voluntary commitments have been made by the European industry to recycle returned material. For other applications, work is ongoing to make similar voluntary take-back approaches feasible.

New recycling technology has been commercialized recently by individual companies and industry associations as part of the industry's voluntary approach. Voluntary action is a progressive way to solve modern problems of modern materials like PVC. It should form the basis for European Union's action.

Thank you,

Message from Helmuth Leitner :

Herrn Schulte Braucks und Krämer

Betrifft:PVC in der Deponie

Da immer wieder der potentielle Verlust von Schwermetallstabilisatoren aus PVC in das "leachate" von Deponien diskutiert wird, so auch wieder in dem "green book", möchte ich Sie gerne auf eine Studie der EEA, Technical report No 38 - Dangerous substances in waste, February 2000 - hinweisen , welche zu folgendem Schluss kommt:

Seite 12:

The conclusions of a major review into the composition of landfill leachate from landfills receiving mainly non-hazardous municipal waste in the UK and Ireland (United Kingdom Department of the Environment, 1995) were:

- A great deal of evidence has been compiled that demonstrates that heavy metals (specifically chromium, nickel, copper, zinc, cadmium, lead and mercury) are not generally present at significant concentrations in leachates from municipal landfills. Mean and median values for all metals were well below concentrations routinely determined in household sewage that is typically flushed from a domestic property.

und weiter

Seite 27:

Conclusions

Although leachate from landfills has potentially high concentrations of heavy metals, organic substances and salts, most of the potential problems associated with this can be solved by appropriate waste water treatment prior to discharge.

Es gibt daher noch einen Grund mehr, PVC als Substanz wie jede andere im Deponieverhalten zu betrachten

Helmuth Leitner

Message from H. Laurent :

2000, 6 th of November

Dear Mr Krämer

As an employer of Atofina, located in France, active in the stearat industry, I'm very much concerned about the Green Paper of the Commission. I have carefully reviewed the pros and cons of the Green Paper and also of the Voluntary Commitment of the European PVC Industry. Here are the comments I would like to make :

- PVC is one of the **most important modern synthetic materials**.
- I know that other plastics than PVC but also more traditional materials are used in other applications but are **often less efficient in ecological and economic terms compared to PVC solution**.
- After their usual life, all products regardless the material they are made of, finally become waste. PVC **recycling now increases** and new improved **recycling technology is under development**. This will ensure that in the **coming decades all PVC based products will find the best ecological** and economic end-of-life treatment.
- **I can't not understand why the European Commission so much insist on PVC** in particular.

- So I strongly recommend that the **EU Commission accepts the industry's Voluntary Commitment**. Please make sure PVC is treated the same as any other material.

For me, I think that PVC problem is more an expert problem than a common citizen's problem. How to know the differences between P.P. , P.E., PS, and PVC products, if you don't work on this subject and if you haven't any precise information from experts that you can understand. You have to compare the different synthetic materials, the pros and cons, without forgiven the different recycling possibilities. The research is progressing each day, and I am sure that our chemical society will find a lot about recycling. Today, it 's one of our main goals, if we want to be there in a few years.

I thank you for your attention.

H. LAURENT

Wien, am 29.11.2000

**Stellungnahme zum „Public Hearing“ am 23.10.2000
in Brüssel zum PVC-Gruenbuch**

Da ich anlässlich des Hearings zu den Statements von „Mischek GmbH“ und „Vienna Hospital Association“ im Rahmen der zur Verfügung stehenden Zeit keine Gelegenheit zu einem Kommentar hatte, möchte ich Ihnen diesen auf diesem Wege mitteilen.

1.) Mischek GmbH (Mischek Civil Engineering Company) – Dr. Thomas Belazzi:

Herr Dr. Belazzi ist seit einigen Monaten bei oben angeführtem Unternehmen tätig. Ich kenne Herrn Belazzi persönlich aus seiner langjährigen Tätigkeit bei Greenpeace Austria und habe in vielen persönlichen Gesprächen versucht, einen konstruktiven Dialog bezüglich Chlorchemie und PVC mit Herrn Belazzi zu führen – was leider nicht möglich war.

Das Unternehmen Mischek ist ein Wohnbauunternehmen, das sich entschlossen hat, „PVC-frei“ in Wien zu bauen. Es ist der Firma Mischek nicht gelungen, dieses Vorhaben zu realisieren, da sie zum Beispiel bei Fenstern sehr wohl PVC-Fenster einsetzt. An den Ausführungen von Herrn Belazzi ist sicher richtig, dass es auch in Österreich seit nunmehr 10 Jahren einen Dialog bzw. Diskussionsprozess PVC betreffend gibt. Richtig ist weiters, dass Mischek im Internet angekuendigt hat, „PVC-frei“ zu bauen.

Nicht erwähnt hat Herr Belazzi jedoch, dass sich in Österreich – einem wahrlich traditionellen Holzland – die Mehrheit der Konsumenten für PVC-Fenster entscheidet. Und das ist kein Zufall: Im Sinne einer nachhaltigen Beurteilung eines Produktes nach ökonomischen, ökologischen und sozialen Aspekten ist die Entscheidung für PVC-Fenster verständig. Zu erwähnen ist auch das in ganz Österreich installierte Sammelsystem für das nachfolgende Recycling von PVC-Fenstern. Alles in allem eine Erfolgsstory mit einem realen Hintergrund.

2.) Vienna Hospital Association, Herr Bruno Klausbruckner:

Herr Bruno Klausbruckner hat in seinem Statement ausgeführt, dass die Krankenanstalten in Wien versuchen, die im medizinischen Bereich zahlreich eingesetzten PVC-Produkte zu substituieren.

Dazu möchte ich anmerken, dass sich gerade in diesem sensiblen Bereich PVC seit vielen Jahren bewährt hat. Sollte auf ein Substitut umgestiegen werden, dann ist es gerade in diesem Anwendungsfall von enormer Wichtigkeit, diese Substitute in der gleichen Tiefe auf ihre Tauglichkeit zu prüfen, wie dies bei PVC getan worden ist – ein Umstieg ohne vorherige Untersuchung der Substitute wäre ganz einfach zu riskant, und derzeit gibt es keine derart akribisch untersuchten Ersatzprodukte. Ein PVC-Ersatz ist aus diesen Gründen vehement abzulehnen.

Franz Schmalwieser
Geschäftsführer