

# ECVM Industry Charter for the Production of Emulsion PVC

## ECVM's Contribution To Responsible Care®

### Introduction

Polyvinyl chloride (PVC) is one of the world's oldest plastics and has evolved since the 1940s to become a universally-used, cost-effective, adaptable, safe and environmentally-effective material.

It is a highly efficient converter of raw materials, combining salt and oil to produce a plastic that is specified for a broad range of long and short life applications.

Production processes for PVC have been continually improved in recent years and their environmental impact steadily reduced. The European PVC industry recognises, however, that further improvements must be pursued and their scope continually reviewed and widened.

### Objectives

The objectives of Members of the European PVC industry are:

- To prevent any detrimental effects from their operations and products to the environment or human health, as far as is in their command.
- To comply, as a minimum requirement, with environmental regulations and quality standards laid down by national and international regulatory authorities.
- To achieve a "closed loop concept" production process, as far as is feasible with practicable technology.

### Directives

- Operations covered by this Charter include all processing, handling, storage and transport of primary feedstocks and final products (excluding the conversion of PVC resin to the finished article).
- All recoverable quantities of VCM in waste streams from the production process are recovered and recycled into the process, as far as it is possible with reasonable efforts.
- Residual levels of VCM in waste streams are treated by appropriate technology before these waste streams are discharged into the environment.
- All significant outlets for vent-gas and effluents from the production process are kept under surveillance and valued, in order to determine the effectiveness of the control technology and

to measure the final discharge of potential contaminants into the environment.

- Fugitive emissions are reduced by installing leak-safe technology and by frequent inspections to check the integrity of all relevant sealings. This can be supported by installing fixed monitoring systems for measuring VCM concentrations.
- Residual levels of VCM in the final PVC product will not exceed the amounts agreed.

## **The Members of the European Council of Vinyl Manufacturers**

### **Accept**

- That all production, manufacturing and disposal processes of modern industrialised society have an impact on the environment. PVC is no exception.
- That the European PVC industry's stakeholders have the right to expect that that impact is determined and, if necessary, reduced in order to meet environmental quality objectives within the scope of Best Available Techniques (BAT) experience and resources.
- That, as a material whose production, use and disposal continually evolves, stakeholders have the right to expect the industry to be vigilant and forward-looking in ensuring that appropriate objectives are set and met.
- That all ECVM Members will share their environmental control 'know how' by bilateral agreement.

### **Commit**

- To agree priorities for environmental control and improvement to:
  - Reduce emissions and other environmental pollutants by introduction of voluntary, controlled systems of target-setting, measurement, and operational improvements, setting short, medium and long-term targets that consistently maintain improvements in environmental performance.
  - Invest in research to pursue future improvements in line with the agreed priorities.
  - Work in associated industry groups, where appropriate, to improve understanding of shared environmental concern, and to improve processes and technologies to minimise environmental impacts, such as improved recycling and incineration techniques.
  - Annually review priority standard targets and future areas for action.
- To ensure that the environmental control performance, if not made by the national authorities, will be open to review by an independent third party (eg: an accredited environmental verifier according to the rules of the European Union Eco Audit Scheme) subject to specification and agreement between ECVM and member companies.
- To agree that, whereas some companies already comply with the criteria of this Charter, those that do not yet comply will use their best efforts to do so by end 2003.

## **Act**

- To ensure that any ECVM Member which consistently fails to meet agreed industry targets of environmental improvement over clearly-defined periods of time, is called to account.
- To work with other industry bodies, Non-Governmental Organisations (NGOs), stakeholder groups and other interested organisations to agree common working agendas to improve environmental performance as research, science and technology increases understanding of the relationship between the PVC industry's activities and the needs and concerns of its stakeholder communities.

# Annex to Industry Charter for Production of E - PVC (Emulsion Process)

(Reference: ECVM Best Available Techniques for Emulsion PVC)

## ENVIRONMENTAL STANDARDS FOR PVC PRODUCTION (EMULSION PROCESS)

Total VCM-emission in the air : < 1000 g/ton of E-PVC

VCM-emission in aqueous effluents

For stand alone Emulsion PVC plant :  
and < 1 g/m3 of effluent  
< 10 g/t of E-PVC

In case of common treatment with Suspension PVC units :

or < 1 g/m3 of effluent  
< 5 g/t of E+ S-PVC

VCM-concentration in final regular product : < 1 g/ton of E-PVC