

June 30, 2008

**E A S C R position on**

Proposal for a

**DECISION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL  
amending Council Directive 76/769/EEG as regards restrictions on the marketing and use  
of certain dangerous substances and preparations (Dichloromethane)****Executive Summary**

Dichloromethane (DCM) is a chlorinated aliphatic hydrocarbon with a very fast evaporation that is used as solvent in several applications. It is classified Xn harmful, considered as a possible carcinogen Cat 3 and was used as anaesthetic in the early 20<sup>th</sup> century.

Today the vast majority of decorators and consumers (many hundreds of thousands!) that work with DCM paint removers across the EU do so without using the required appropriate personal protection equipment (PPE) and fail to comply with national regulations. When working with DCM-based paint strippers, occupational exposure limits are regularly exceeded both when working insides or outdoors.

According to the "STOP" principle of Directive 98/24/EG on the protection of the health and safety on workers from the risks related to chemical agents at work "Substitution should occur before Technical, before Organizational and before Personal preventive measures".<sup>12</sup>

Effective and safer non-DCM paint removers exist since many years and the use of DCM paint strippers have declined to 25% market share in the EU<sup>5</sup>). Sweden, Denmark and Austria restricted the use of DCM paint strippers more than a decade ago and Germany notified a national ban in 2007. Alternatives can and are regularly used for all purposes for which DCM strippers are being used, including restoration of cultural heritage.

While alternatives themselves are often slightly more expensive, the total cost of their use is significantly lower, as they do not require the use of special "respiratory protective equipment with independent air supply and special gloves" (cost: between €2.000 and € 3.000). The authorities have not been successful in controlling and ensuring the application of personal protective equipment (PPE) for the use of DCM paint strippers – and indeed cannot be as most professional paint stripping activities take place in the premises of a client.

There is no justification to protect 5% of the virgin DCM production that goes into a declining business like paint stripping, representing a mere profit of € 1.3 – 3.2 million)<sup>5</sup> by increasing

- bureaucracy (license and training system), and
- cost to society and end-users (customers) for the enforcement of expensive PPE (personal protective equipment) requirement

Supporting the possibility of continued use of DCM paint strippers by professionals would also stifle the development of new markets of non-DCM solvent based paint strippers with an estimated turn-over of € 240 million<sup>5</sup>. This relatively untapped market, driven by SMEs would also allow existing DCM paint stripper producers to continue to participate with own alternative formulations, thus increasing competition and choices for customers at lower stripping cost and increased safety.

Prohibiting the use of DCM in a small declining market segment, like paint stripping for consumer and professional use, will create a *win-win-win* solution: for the chemical industry that can produce and sell more safer alternatives; for consumers and workers who no longer endanger their health when stripping paint and for the environment.

EASCR therefore supports the position of the rapporteur Carl Schlyter to protect human health from dangerous substances and to open the market for better and safer technologies.

## **Background**

Seven years after an internal draft of the EU Commission on a restricted use of Dichloromethane (DCM) paint strippers was brought forward, the Commission has now finally adopted a proposal. This proposal was sent to the Parliament on 14 February 2008.

### DCM usage is declining in the paint stripper market in the EU

In Europe 25% of all paint strippers used (27 – 40.000 tons<sup>1,2,3,5</sup>) are based on DCM with a typical composition of 70-90% DCM (Xn harmful, R40 possible risks of irreversible effects, Carc. Cat 3 possible carcinogen) and 10% methanol (T, toxic). In the EU just 150 – 180 people are employed to produce these paint strippers<sup>1</sup>. DCM is narcotic, can effect the central nervous system, can lead to irritation of the eyes and respiratory tract, lung oedema and acute effect on the heart, liver and kidneys<sup>16</sup>, and is a priority substance in Annex X of the Water Framework Directive 2000/60/EC.

### Dangerous paint stripping and illegal work practice

DCM is one of the fastest evaporating solvents, its vapours are 3 times heavier than air and it was used as general anaesthetic in the early 20<sup>th</sup> century<sup>6</sup>. Existing exposure limits differ in the EU dependent on the member state<sup>16</sup> and range from 10 to 353 mg/m<sup>3</sup> and traditional bad work practice contributed to a number of registered accidents and fatalities, thus demonstrating the inability of member states to ensure that professional users follow existing regulations and consumers are informed about the risk of such paint removers.

European measurements confirmed high DCM exposure and the average values (95-Percentile) were found to be 2475 mg/m<sup>3</sup> for interior and 1339 mg/m<sup>3</sup> for exterior paint stripping<sup>9</sup> well above the highest national occupational exposure limit of 353 mg/m<sup>3</sup>

RPA (Risks & Policy Analysts) concluded in their impact assessment for the EU Commission (page 84 – 85) that the majority of professional users of DCM paint strippers do not monitor the concentration of DCM at work, have limited knowledge of occupational exposure limits and don't know how to protect themselves and/or their employees<sup>5</sup>.

Member states like Sweden, Denmark and Austria have already restricted DCM paint strippers more than a decade ago. In Denmark the switch to DCM free paint strippers has been supported by the Danish Paintmakers Association<sup>7</sup> in 2002. In Germany Henkel KG discontinued the production of DCM paint strippers more than a decade ago and end of 2003 AKZO-Nobel stopped and switched to non-DCM formulations.

The aircraft stripping industry, representing one of the largest end-user sectors for DCM in the past, have already switched to alternatives<sup>1</sup>.

#### Several studies prove the existing risk

From 1999 until 2005 the EU Commission initiated 2 studies, the TNO<sup>1</sup> and the ETVAREAD<sup>2</sup> report. The Scientific Committee of the EU Commission consistently challenged that the health risks of DCM were not sufficiently addressed<sup>4,13</sup>.

ECSA (European Chlorinated Solvents Association) and producers of DCM paint strippers describe DCM-free paint strippers as not effective, more dangerous than DCM and non economic.

ECSA advocate the addition of vapour retardants to reduce the risks with DCM<sup>10</sup>. However, vapour retardants are neither new nor effective to reduce exposure to acceptable limits. They are used since 1940's<sup>11</sup> primarily to increase effectiveness of DCM. And the ETVAREAD report demonstrated that vapour retarded DCM paint removers exceed the exposure limits, even when an air exchange rate of 4 was used that is higher than normal<sup>4</sup> (as pointed out by the Scientific Committee).

#### Effective non-DCM paint strippers with lower risk profile

In November 2005 the EU Commission organized a Paint Stripper Forum in Brussels. During this meeting Dr. Orthon, a toxicologist at the German BAuA demonstrated that alternative solvents to DCM in paint strippers have a lower risk than DCM<sup>14</sup>.

Dr. Rühl (Bau-BG) presented a comparison test done in 2005, showing that every coating that can be removed with a DCM paint stripper can also be removed, using a paint stripper free of DCM<sup>15</sup>.

2007 RPA concluded that "on balance, there are alternatives with a much better human health and environmental hazard and risk profile"<sup>5</sup>.

#### Producers of non-DCM paint strippers were excluded from discussions in the Limitations Workgroup until November 2006

Since 2003 producers of non-DCM paint strippers and alternative solvents to DCM have actively tried to defend the misleading and incorrect information producers of DCM and DCM paint strippers shared about their products with the EU Commission.

Late 2004 EASCR was founded to protect producers of non-DCM paint removers against incorrect and biased arguments and statements from ECSA and DCM paint stripper producers as represented by the "UK Dichloromethane Paint Removers Group" (today called "Paint Stripper Formulators Group").

EASCR was not founded to restrict DCM paint strippers or to promote specific solvents (e.g. DBE<sup>®</sup>) as continually stated by ECSA. Some of our members still produce DCM paint strippers but have a strong desire for a market environment that would support a switch to safer formulations.

A change in the board of the Limitation Workgroup allowed EASCR to be invited, based on a request by Commissioner Verheugen in November 2006. Since EASCR's participation we have experienced a very fair, neutral and objective management of the discussion.

In February 2007 Germany launched an own national restriction proposal to catalyse an end to the discussion (supported by France), in April 2007 RPA finalized their impact assessment and recommended a ban for consumers and professional users and the Commission announced their restriction proposal that is already a compromise of the RPA report recommendations.

### **Literature**

- 1 Methylene chloride: Advantages and drawbacks of possible market restrictions in the EU. TNO-STB study finalised in November 1999. [http://ec.europa.eu/enterprise/chemicals/studies\\_en.htm](http://ec.europa.eu/enterprise/chemicals/studies_en.htm);
- 2 Effectiveness of vapour retardants in reducing risks to human health from paint strippers containing dichloromethane by ETVAREAD expert group. Final report published in April 2004 [http://ec.europa.eu/enterprise/chemicals/studies\\_en.htm](http://ec.europa.eu/enterprise/chemicals/studies_en.htm);
- 3 CEFIC presentation at Paint stripper Forum in Brussels – November 2005 – available on CIRCA
- 4 Scientific Committee on Health and Environmental Risks opinion on Effectiveness of vapour retardants in reducing risks to human health from paint strippers containing dichloromethane. ETVAREAD Final Report 01 April 2004. Adopted by the SCHER during the 4th plenary session of 18 March 2005. [http://ec.europa.eu/health/ph\\_risk/committees/04\\_scher/scher\\_opinions\\_en.htm](http://ec.europa.eu/health/ph_risk/committees/04_scher/scher_opinions_en.htm)
- 5 Impact assessment of potential restrictions on the marketing and use of dichloromethane in paint stripper. RPA study finalised in April 2007. [http://ec.europa.eu/enterprise/chemicals/studies\\_en.htm](http://ec.europa.eu/enterprise/chemicals/studies_en.htm)
- 6 Manno M. Rugge M. Cocheo V.: Double fatal inhalation of dichloromethane. Human Exp. Toxicol, 1992, 1, 540-545
- 7 Danish Paintmakers Association, Letter to the Commission dated 8 March 2002, available on CIRCA
- 8 Putz et al, J. Environ Pathol Toxicol 2: 97-112
- 9 R. Rühl, D. Höber, S. Bredendiek-Kämper: European measurements confirm high exposure during paint stripping; Gefahrstoffe – Reinhaltung der Luft, 64 (2004) Nr. 11/12 Dez. 467 – in English
- 10 ECSA position on Commissions proposal – 7<sup>th</sup> May 2007
- 11 H.Hadert: Rezeptbuch für die Farben- und Lackindustrie, Teil II, Seite 36-39, Jahrgang 1944
- 12 Article 6 paragraph 2 of Guideline 98/24/EG of the Council dated 7 April 1998
- 13 Opinion of the Scientific Committee (CSTEE) on TNO Report “Methylene chloride: Advantages and Drawbacks of Possible Market Restrictions in the EU”, adopted on 5 September 2000, [http://ec.europa.eu/health/ph\\_risk/committees/sct/docshtml/sct\\_out69\\_en.htm](http://ec.europa.eu/health/ph_risk/committees/sct/docshtml/sct_out69_en.htm)
- 14 DR. B. Orthen, Toxicology of hazardous substances, Federal Institute of Occupational Safety and Health, BAuA, Germany “Toxicity and Risk of DCM and alternative solvents in paint strippers”, available on CIRCA
- 15 Dr. R. Rühl, Berufsgenossenschaft der Bauwirtschaft (Liability Insurance of the German Construction Industry): “Comparison Test on the Stripping Performance, Effectiveness and Speed on Different Coating Types between DCM and DCM-free Paint Strippers, available on CIRCA
- 16 Commission Staff Working Document “Impact assessment report” {COM (2008) 80 final}{SEC(2008)193} dated 14.2.2008