

“Supporting study that aims at evaluating the need to regulate on toxicity of smoke generated by construction products in fire within the framework of the CPR and the possible impacts of any such measures”

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The role of the [Steering Group](#) and its membership

- Representing 26 organizations
- Two meetings and the workshop



Project aims – from the project specification

The study aimed at evaluating the need to regulate on toxicity of smoke generated by construction products in fire within the framework of Regulation (EU) No 305/2011 and the possible impacts of any such measures.

The study was expected to collect and examine available statistic and scientific data and to provide factual information in order to enable a knowledge based approach.

Collect and analyse existing available information and additional data collected among fire safety professionals, scientists and the main CPR actors and stakeholders



Terms of reference

The terms of reference document included six ‘main research’ questions:

- i. Do Member States currently have regulations on the toxicity of smoke generated in building fires?

- ii. Are there adequate fire statistics in the EU or other evidence (e.g. studies, or medical records) which reliably show that victims of building fires are due to the inhalation of toxic gases from **construction products**?

If there are then Which are the responsible toxic gases?



Terms of reference

- iii. If the victims in building fires are mainly due to the inhalation of toxic gases from construction products, which are the available options for effectively reducing the risk (e.g. to regulate on the smoke toxicity, from constructions products at EU level, to leave Member States to regulate at national level by application of the subsidiarity principle, or to support other fire engineering measures e.g. appropriate building design, installation of alarm systems, etc.)?

Which are the advantages and the disadvantages of each available option?



Terms of reference

- iv. Which would be the possible legal basis for regulating at EU level on the toxicity of smoke from fires in building? Which are the advantages and the disadvantages of each available legislative option?
- v. What could be the possible effects of the above measures on the reduction of fire victims?
- vi. What could be the possible effects on the marketing of construction products if regulated as above?



Outline of the study

Task 1 Development of the methodology

Task 2 Implementation of the methodology

Task 3 Data analysis

Task 4 Reporting

Task 5 Conclusions



Data collection (1)

- Critical review of existing reports and publications
- More than 130 papers and reports reviewed
- More than 90 paper referenced

- Research and testing
- Toxicity, toxic gases and toxicology
- Risk assessment
- Standards
- The six research questions



Data collection (2)

Member State Regulators

Austria	Greece	Poland
Belgium	Hungary	Portugal*
Bulgaria	Iceland*	Romania
Croatia	Ireland	Slovakia
Cyprus	Italy	Slovenia
Czech Republic	Latvia	Spain
Denmark	Lithuania	Sweden
Estonia	Luxembourg*	Switzerland
Finland	Malta*	The Netherlands
France	Norway	United Kingdom
Germany		

* These Member States did not reply



Data collection (3)

European Organisations and Representatives interviewed

- European Commission (EC)
- Construction Products Europe (CPE)
- Fire Safe Europe (FSE)
- Fire Safety Platform
- European Association for Passive Fire Protection
- Plastics Europe
- PU Europe
- European Association of EPS (EUMEPS)
- European Plastic Convertors (EUPC)



Data collection (4)

European Organisations and Representatives interviewed

- European Phenolic Foam Association (EPFA)
- CEI-Bois (The European Confederation of Woodworking Industries)
- European Mineral Wool Manufacturers Association
- Europacable - European wire and cable producers
- Eurogypsum aisbl
- Federation of the European Union Fire Officer Associations (FEU)
- Society of Fire Protection Engineers (SFPE) – European Chapters Coordination Group
- European Flame Retardants Association
- European Fire Sprinkler Network - EFSN



Data collection (5)

European Organisations interviewed

CPE Contact Group –collated from 15 products sectors

Chemicals

PU insulation

Ventilation

Metallic structures

Fire protection

Roof lights

Cold rooms

Glass

Mortars

Steel

Insulated panels and profiles

Plastics

EPS insulation

Wood

Mineral wool insulation

Workshop for discussion, comments and validation of findings



Conclusions 1 and 2

The interviews have shown a clear definition of terminology is lacking e.g fire safety engineering, injury and death. This would be needed for any future European initiative to collect data and produce coherent fire statistics at EU level.

Fire regulations: Member States recognise that all smoke is toxic and have a raft of regulations for the protection of occupants.

Seven Member States referenced regulations on the toxicity of smoke from construction products; five of these have been notified to the EC as regulations. These regulations are from Belgium, France, Lithuania, Poland and Sweden. In each case their application is defined and limited in scope.



Conclusion 3

Fire statistics: The type and format of data collected varies across Member States, and, at present, statistics on smoke toxicity are not collected and therefore the effectiveness of potential measures cannot be assessed.

Data shows the number of deaths per million people reducing over the last 30 years without regulations specific to smoke toxicity. The rate of reduction varies between Member States.

There is general agreement that if statistics are required then collecting them at a European level in a coordinated and harmonised system based on standardised terms and definitions would be critical



Conclusions 4 and 5

Although there is a lack of agreement as to what constitutes fire engineering and also that there isn't sufficient data for a fuller implementation fire engineering is seen as already delivering benefits when used as a tool for demonstrating compliance with national requirements.

Legislation: The responses received do not agree that regulation of toxicity of smoke from construction products is required.

However, if the case for regulation were proven, then an agreed European system for testing and classification, with regulations and requirements at national level is favoured.



Conclusion 6

The responses to the questionnaire showed that legislation at EU level was seen as having a more positive impact than the other two options.

However, greater use of existing legislation and alternative safety approaches were also seen as important in the potential impact of any additional legislation.

If legislation were considered appropriate then detailed cost – benefit and impact analyses would be required and the costs and benefits of existing regulations and alternative active and passive methods, would need to be considered.

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Conclusion 7

There were many comments questioning the usefulness of singling out construction products and emphasising that if legislation related to the toxicity of smoke from construction products were considered appropriate that it would need to be part of an holistic approach to fire and effectiveness of measures and would need to address the issues associated with the toxicity of smoke produced by building contents.

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Conclusion 8

Legal basis: The responses indicate that interviewees believe there would be limited benefits from regulating specifically for the toxicity of smoke from construction products.

Some interviewees believed that there could be greater benefits if the flammability (and hence smoke toxicity) of furnishings and fittings was addressed across all Member States.

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Conclusions 9 and 10

The potential dangers of smoke in general, including toxic smoke, leaking into or being generated in areas that are considered to be safe zones and / or escape routes need to be considered in new or amended existing regulations.

Effect on the marketing of construction products: There is general agreement that regulation of toxicity of smoke of construction products could increase product costs, and potentially remove some products from the market. Additionally, it was agreed a regulation would be expected to impact products by driving improvement and developments of new products..

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vito

vision on technology

Thanks you for your attention





Project Steering Group - List of organisations

Association of Plastics Manufacturers in Europe (Plastics Europe)

Construction Products Europe (CPE)

Danish Firefighter Cancer Association

Danish Transport and Construction Agency

Deutsches Institut für Bautechnik

Efectis France

European Association for Passive Fire Protection (EAPFP)

European Chemical Industry Council (CEFIC)

European Concrete Platform (ECP)

European Confederation of Woodworking Industries (CEI-BOIS)

European Extruded Polystyrene Insulation Board Association (EXIBA)



Project Steering Group - List of organisations

European Insulation Manufacturers Association (Mineral Wool) (EURIMA)

European Manufacturers of Expanded Polystyrene – Construction (EUMEPS)

European Phenolic Foam Association (EPFA)

European Plastic Convertors (EUPC)

Federation of European Rigid Polyurethane Foam Associations (PU Europe)

Federation of the European Union Fire Officer Associations (FEU)

Fire Safe Europe

Fire Safety Platform

Flame Retardant Olefinic Cable Compounds (FROCC)



Project Steering Group - List of organisations

Ministero dell'Interno, Italy

Netherlands Standards Organisation (NEN)

**Phosphorus, Inorganic and Nitrogen Flame Retardants
Association (PINFA)**

**Portuguese Agency for Competitiveness and Innovation
Portugal**

Promat Research and Technology Belgium

Research Institutes of Sweden (RISE)

University of Central Lancashire, UK

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