

Quality of petrol and diesel fuels

1996/0163(COD) - 26/06/2013 - Follow-up document

Article 8a of Directive 98/70/EC requires the Commission to report its conclusions on the development of a test methodology to assess the risks for health and the environment from the use of metallic additives in fuels to the European Parliament and the Council.

Metallic fuel additives (MFA) are substances intentionally added to fuel (petrol, diesel and biodiesel) to improve its performance. These additives eventually enter the environment since their metallic portion is not degraded during any stage of their production or use. Thus, they can become a source of exposure for humans and/or biota throughout their life cycle. This creates a possible impact on health and the environment. This potential impact justifies their regulation through the adoption of limit values based on the precautionary principle.

- **Assessment of potential risks for health and environment of MFA:** to assess the potential impacts of MFA on the compounds produced during vehicle fuel combustion and/or remaining in the exhaust it is necessary to compare the emissions produced with and without using MFA. In this context, the Commission's Joint Research Centre has developed a test protocol for monitoring and calculating the emission data with regard to MFA, focusing on the use stage of their life-cycle. In this protocol, measurements are made at the tailpipe and the emissions are compared for fuel containing MFA with the same fuel without the MFA.

There is a potential impact on health and the environment by the use of MFA in fuel. This impact is affected by several factors: the type of MFA; the level of concentration; the level and duration of the exposure; and the pathway for this exposure. The metallic components of MFA could be a hazard for both humans and the environment due to their intrinsic reactivity, toxicity and their possible capacity to accumulate within living organisms.

In the past, health concerns associated with MFA (such as lead) have led to the phasing out of their use. It is apparent that MFA have metallic components which could in themselves be a hazard for both humans and the environment due to their intrinsic reactivity, toxicity and their possible capacity to accumulate within living organisms.

New substances are being developed for which the available health and environmental data are limited and little is known about their eco-toxicity and toxicity. Determination of their toxicity and eco-toxicity is a prerequisite to assessing their actual impacts on the environment and health. Hence there is a need to develop a test methodology.

- **Test methodology:** the purpose of the methodology is to assess the risks for health and the environment from the use of MFA. It is intended to be sufficiently generic so as to apply to any MFA. Prior to the assessment, a holistic approach for evaluating the environmental implications of various choices among chemicals, products and technologies may be needed to prioritise efforts and to provide input to risk managers to enable better targeted decisions. The report provides a description of the methodology: characteristics of emissions during the life-cycle, hazard assessment, exposure assessment, risk characterisation, risk management, as well as its application. This methodology has been developed to be employed by any party interested in the establishment or revision of limit values for MFA in the Directive. The Commission will monitor its application and take all appropriate initiatives.