ATC position on the Ecodesign for Sustainable Products Regulation (ESPR)

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Introduction

The Technical Committee of Petroleum Additive Manufacturers in Europe (ATC) was established in 1974 for member companies to discuss topics of a technical and statutory nature which are a concern to our industry. ATC works to develop common industry approaches in response to health, safety and regulatory legislation which are based on scientific and technical principles, to the benefit of end consumers and environmental protection. ATC provides its members with a platform to build and share high-level technical expertise and to cooperate with relevant stakeholders active in the development of petroleum additive specifications and testing. Our members continuously innovate to find ways to improve the performance of lubricants and fuels, whilst ensuring that their products are safe when used as intended.

Ecodesign for Sustainable Products Regulation (ESPR)

ATC members support the EU Commission's goal to develop more environmentally sustainable and circular products, as demonstrated over numerous decades through their track record of producing innovative chemistry and products that are the critical element to improving the performance of fuels and lubricants, and consequently the performance and lifespan of equipment that use such fuels and lubricants.

ATC members note that lubricants have been proposed as one of the initial priority product groups to have eco-design requirements defined as part of the ESPR. **ATC recommends that Lubricants are not considered a priority product group for ESPR**, as explained below. Instead, ATC believes it would be prudent for the EU authorities to focus on other more homogenous product types to help define practical, workable ESPR requirements before focussing on product groups such as lubricants which involve an extremely high number of very diverse ingredients, sold into a high number of diverse applications.

Product Category Lubricants

Lubricants are typically complex mixtures of base oils and performance enhancing additives and includes the sub-group of greases.

Lubricants are used in a large variety of applications with different requirements, such as wind turbines, internal combustion engines, hydraulic systems, transmission systems, metal working and other industrial/manufacturing processes. Modern, high performing, lubricants and fuels are essential for global transport and, hence, the EU economy. They allow equipment and vehicle manufacturers to comply with increasingly stringent fuel efficiency, equipment durability and emissions targets, thereby directly benefitting the economic and societal needs of the European population.

As well as imparting critical and essential technical performance characteristics to lubricants and fuels (e.g., deposit control, dispersancy, anti-oxidancy, anti-corrosion, flow improvement, etc), additives also contribute to the sustainability goals of the Green Deal by:

- Maintaining durability of engines, transmission systems and other technologies, so increasing lubricant lifespan and service intervals;
- Increasing drain intervals for lubricants, thus reducing use of mineral oils and other chemicals;
- Enhancing fuel economy or energy efficiency and reducing carbon dioxide emissions;

- Reducing particulate and NOx emissions;
- Allowing for the use of alternative fuels derived from renewable/bio resources;
- Enabling original equipment manufacturers to meet the demands of both legislators and consumers in terms of fuel economy, emissions and use of fuels with certain environmental quality specifications (e.g., low sulphur);
- Allowing distillates to flow under different and extreme temperature conditions, so avoiding the seasonal need for different oil grades.

Whilst recognising the benefit of lubricants to a well-functioning society, ATC recommends that lubricants are not considered a priority product group for ESPR for the following reasons:

- Lubricants placed on the EU market today already provide considerable environmental sustainability benefits such as allowing for longer drain intervals thereby minimising the creation of waste, and by increasing the energy efficiency of machines and equipment thereby reducing the depletion of natural resources.
- Lubricants in themselves are not 'efficient', it is their application in a system which confers efficiency to the entire system. Engines, wind turbines, compressors etc, cannot function without a lubricant but the efficiency of the system is a combination of coordinated engineering and lubricant design.
- Most lubricants are formulated to comply with downstream industry manufacturers specifications[1]. For example, in the case of engine lubricants, specifications are developed in response to EU and government regulations[2], so they are already subject to performance, quality control and labelling requirements. Failure to use products designed for specific makes and models of vehicles can result in reduced energy efficiency, higher emissions, increased waste oil, poorer equipment durability and potentially catastrophic engine failure.
- As a product group, lubricants contain a very wide range of different sub-groups, and it would be extremely challenging to develop requirements that could apply to all lubricant sub-groups due to the diversity of applications where lubricants are applied.
- The fact that the voluntary EU Ecolabel scheme has existing criteria for sub-groups of lubricants commonly used in environmentally sensitive applications should not be a reason to prioritise lubricants as a product group for ESPR. Formulating a lubricant that meets the EU ecolabel criteria[3] is extremely challenging and applying those criteria across the entire range of lubricants would disqualify most lubricants currently placed on the EU market. ATC members believe that it is important to separately maintain the EU Ecolabel criteria for this subset of lubricants as the gold standard to enable downstream users to differentiate the products with the highest environmental credentials, rather than have every lubricant on the EU market meet the same criteria. Additionally, for those applications covered by the EU Ecolabel, the lubricant must meet the relevant minimum technical performance criterion but they may not necessarily provide an optimum level of performance/protection for the vehicle or equipment. This is mainly due to the compromises in product composition that the lubricant formulator must often make to ensure the lubricant meets every criterion to qualify for the Ecolabel award.

[1] E.g., see ACEA Oil Sequences: General Requirements - May 2022

[2] E.g., Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO2 emission performance standards for new passenger cars and for new light commercial vehicles, and repealing Regulations (EC) No 443/2009 and (EU) No 510/2011

[3] Commission Decision (EU) 2018/1702 of 8 November 2018 establishing the EU Ecolabel criteria for lubricants

- Only a minority of product group lubricants are sold to the consumer, and all the ingredients used are already subject to extremely strict controls under existing EU legislation such as REACH[4] and CLP[5].
- Finally, the recent JRC workshop to discuss case studies for the Safe and Sustainable by Design (SSbD) framework highlighted the significant amount of effort that is going to be required to define how this framework will operate to encourage companies to design products that are 'safe' and 'sustainable', especially for Small and Medium-sized Enterprises. The ATC's position on SSbD has been published[6] and highlights how the lubricant and fuel additive industry already has processes in place that encourage the development of products that would meet the concept of SSbD, even though the exact details of what constitutes SSbD are as yet unknown.

Digital Passport

A key element of the ESPR is the new concept of a Digital Product Passport (DPP), which each product placed on the EU market would need to have. ATC members recognise how the DPP might close a gap that exists for some complex articles to facilitate their re-use in a circular economy, but this appears to be an added complexity for lubricants, which are essentially mixtures of ingredients, that will achieve no additional benefit. This is because there is an existing requirement for companies placing certain hazardous products on the EU market to notify product composition to the EU regulators and include a Unique Formulation Identifier (UFI) on each label and/or container. The Commission must therefore take care that their proposal for a Unique Product Identifier (UPI) to exist as part of the product's DPP does not duplicate existing requirements to register the details of certain hazardous products and cause confusion to downstream users.

Substances of Concern

ATC is especially concerned by the emphasis being placed on future products not containing so-called Substances of Concern (SoC) as a key objective of the ESPR. As well as there being the possibility of confusion with the Substance of Very High Concern (SVHC) terminology used to describe certain hazard classes and categories in EU REACH, the expansion of hazard classes and categories for this new terminology under the ESPR is highly likely to disqualify many very effective lubricants from the EU market, placing EU machinery and equipment operators at competitive disadvantage to users operating outside the EU and doing harm to the environment because of less efficient operation of equipment. Some toxicological properties of additive chemistry are an unavoidable consequence of its key performance attributes (e.g., surface active chemistry etc). ATC member companies are already faced with a significant challenge due to the re-classification of existing chemistry in a more severe hazard class and/or category than was previously the case and although the substitution of a hazardous ingredient with a less hazardous one is very simple conceptually; in practice it is much more difficult and cannot be achieved quickly as described in ATC's document on SSbD. ATC members would like to see the practice of substitution requiring the same amount of hazard (and life cycle) information to be available for the replacement chemistry/product as exists for the chemistry/product being

[4] Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

[5] Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

[6] ATC Document 145 - ATC position paper on SSbD criteria

replaced. This approach is already advocated by an important downstream user of lubricants, the automotive industry[7], to avoid what they have termed 'regrettable substitution', which can result in numerous costly and time-consuming reformulations and repeat approvals over several years, as additional testing reveals hitherto unknown hazard properties of the replacement product.

Assuming that the Commission is intent on expanding the hazard classes and categories of chemistry that would be prohibited in products regulated under the ESPR, it will be essential for lubricants to be able to contain a reasonable amount of allowed hazardous material which would therefore be present in the end-of-life lubricant (e.g., for there to be limits on the addition of SoCs at product design rather than a ban) or the EU market will be faced with losing high performing lubricants that bring so many additional environmental benefits.

The lubricant industry has had an established way of effectively recycling end-of-life lubricants containing SoCs in place for many years, and recyclers are fully aware of the possibility that such lubricants may contain hazardous chemistry. The recyclers have processes and procedures in place that manage that scenario thereby ensuring circularity for used lubricants without the need for impractical product design requirements such as the prohibition of SoCs in virgin products. ATC members believe that circularity of lubricants could be more quickly improved through a more robust enforcement of existing waste collection schemes by individual Member States before prioritising lubricants for additional requirements as part of the ESPR.

As well as setting realistic thresholds for the presence of SoCs in lubricants the Commission must also avoid falling into the trap of requiring lubricants to contain zero amount of SVHCs and must instead either confine their ambition to lubricants containing zero intentionally added SVHCs, which is a condition in one of the most prestigious EU National environmental standards (the German Blue Angel[8]) or setting a practical *de minimis* level for intentionally or unintentionally added SVHCs such as impurities. This is because any lower limit must be enforceable and no supplier could qualify their product as SVHC-free given the finite limit of detection for most substances, especially when dealing with a complex matrix like a lubricant. This is a practical approach not least because the primary legislation for the protection of consumers and the environment from SVHCs is the Generic Approach to Risk Management in REACH (GRA), which will eventually include the new hazard categories recently introduced by CLP. ATC members believe that the combination of the extended GRA and existing environmental standards such as the EU Ecolabel scheme provide a more effective way of protecting consumers and/or the environment from exposure to these substances and allow consumers to select lubricants which present lower environmental and health risks.

Product Carbon Footprint (PCF)

ATC members are in essence chemical manufacturers. ATC recommends Together for Sustainability (TfS) 'The Product Carbon Footprint Guideline for the Chemical Industry' as best practice for the global fuels and lubricants additive industry and welcomes and supports the work of the fuels and lubricants value chains in developing and maintaining harmonised (aligned) PCF methodologies and guidelines for both cradle to gate (lubricant formulator/marketers gate) and cradle to grave/end of life.

[7] ACEA REACH Automotive Industry Guideline: Annex O (ACEA Best Practice for the use of Sustainable Chemicals in the Automotive Industry)

[8] DE-UZ 178: Biodegradable Lubricants and Hydraulic Fluids