

PFAS RESTRICTION PROPOSAL

IMPACT ON THE AUTOMOTIVE INDUSTRY

FPP4EU

11th December 2023

acea

[REDACTED]

[REDACTED]

[REDACTED]

WHO WE REPRESENT

ACEA MEMBERS



DAIMLER
TRUCK



IVECO • GROUP



Renault
Group

TOYOTA

VOLKSWAGEN
AKTIENGESELLSCHAFT

V O L V O

WHAT WILL HAPPEN IF THE CURRENT PFAS RESTRICTION PROPOSAL WOULD BE ADOPTED



From This



To this

No derogations for vehicles means no new vehicles on the market in the near future

Existing vehicles could not be repaired as spare parts are also impacted

A balanced restriction will be crucial for the automotive industry

USES IN ADVANCED KEY TECHNOLOGIES

A vehicle consists of around a hundred thousands of parts (cfr REACH definition of article)

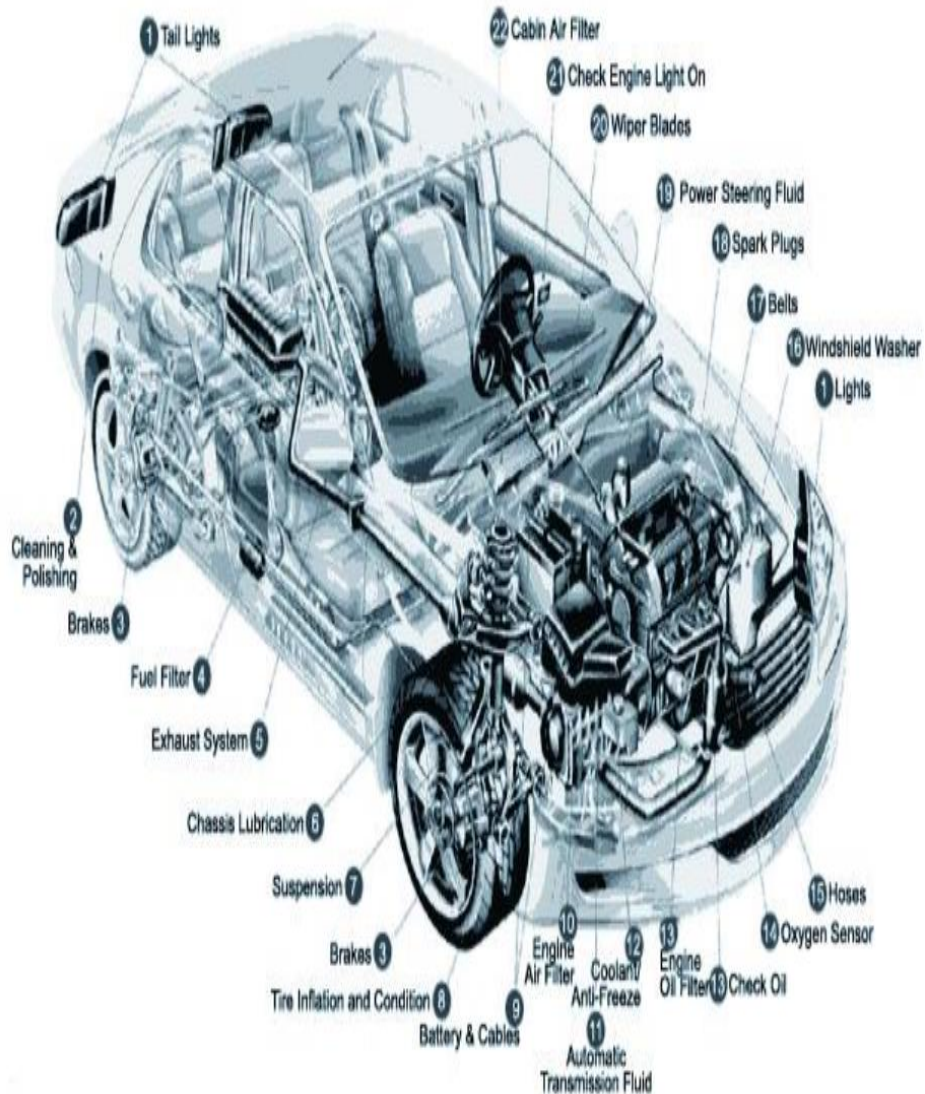
All parts have to satisfy high standards and quality requirements.

- These include guaranteed vehicle safety, reliability under large temperature fluctuations, flame retardancy and high durability over the whole lifecycle of 15 to 22 years!

This requires the application of advanced technologies and optimized materials.

- PFAS and mainly fluoropolymers are deployed in all these key roles because of their unique special properties. Without the capability of these unique properties, both existing vehicles and future automotive technologies would be inconceivable.

MAKES IT A HUGE CHALLENGE TO MAKE THE PANAROMA



MATERIAL DATA
SYSTEM

US DE JP KR CN

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DXC TECHNOLOGY

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New to IMDS?

- Reading for New Users
- Company Registration
- Create an MDS

IMDS INFORMATION PAGES

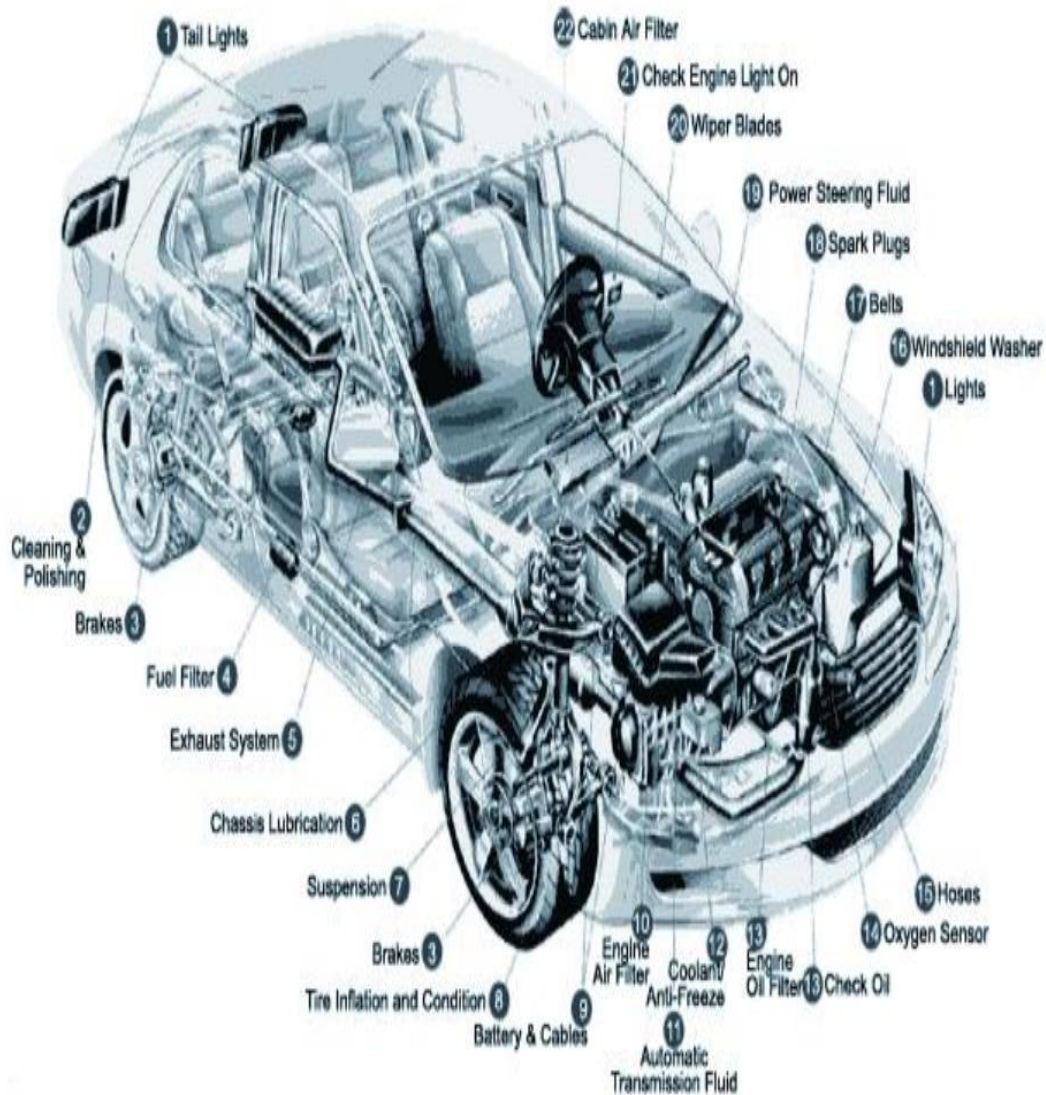
The IMDS (International Material Data System) is the automobile industry's material data system. Initially, it was a joint development of Audi, BMW, Daimler, EDS (after acquisition in 2008 part of HP, now DXC Technology), Ford, Opel, Porsche, VW and Volvo. Further manufacturers have since joined the [community](#) and IMDS has become a global standard used by almost all the global OEMs. Talks are being held with additional manufacturers regarding their participation in IMDS.

In the IMDS, all materials present in finished automobile manufacturing are collected, maintained, analysed and archived. IMDS facilitates meeting the obligations placed on automobile manufacturers, and thus on their suppliers, by national and international standards, laws and regulations.

[IMDS Capability Fact Sheet \(A4\)](#)

[IMDS Capability Fact Sheet \(US Letter\)](#)

WITH AN OUTCOME THAT THE ENTIRE VEHICLE IS IMPACTED



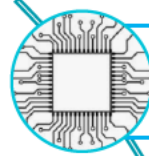
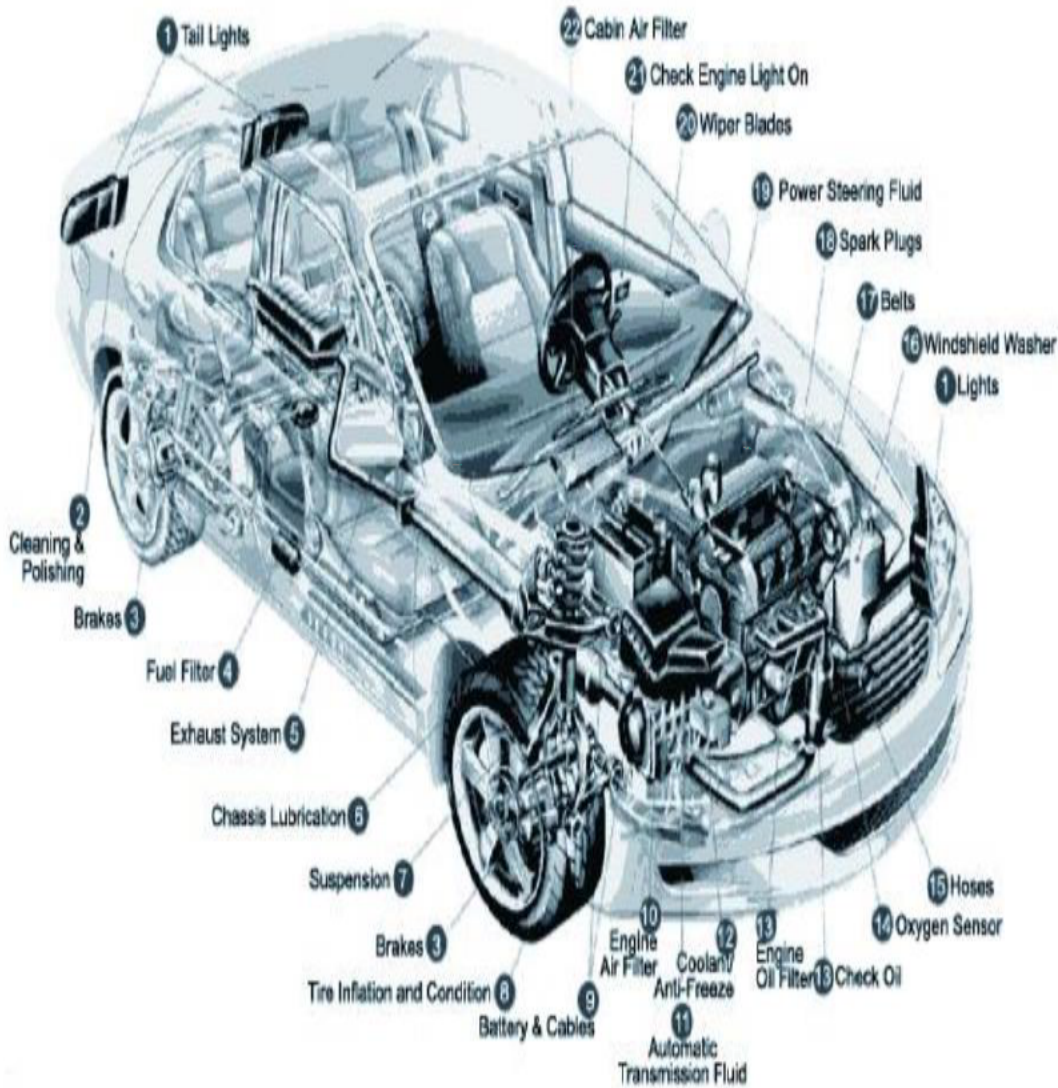
semi-conductors, sensors, PCB, display, passive components, poly-switches, cables & connectors, binder for electrodes, Separator membrane coat, sealings, edge coating on electrodes, electrolyt Proton exchange membrane, electrodes, humidifier membrane, H2 sensor

Lines and hoses, sealing systems (static and dynamic), gaskets, membranes (valves, sensors) oil, grease,

bearing, bushing, guides, ball-joints, control cables screws, nuts, clips, ...

Process additive.....

REQUIRES ORGANISING PER SUBDOMAIN



Electronic components and control units



Rechargeable battery cells



Fuel cell



High performance lubricants



Combustion engine



Air condition unit



Hard chrome plating

NON EXHAUSTIVE LIST

TO CONCLUDE IT IS IMPOSSIBLE TO SUBSTITUTE ALL OVERNIGHT

The wide variety of impacted applications will make substitution very complex and will affect the entire design

Most vehicle designs take about 3 to 5 years to move from initial concept to finished car if mature material and proven technology is available=meaning alternative substances.

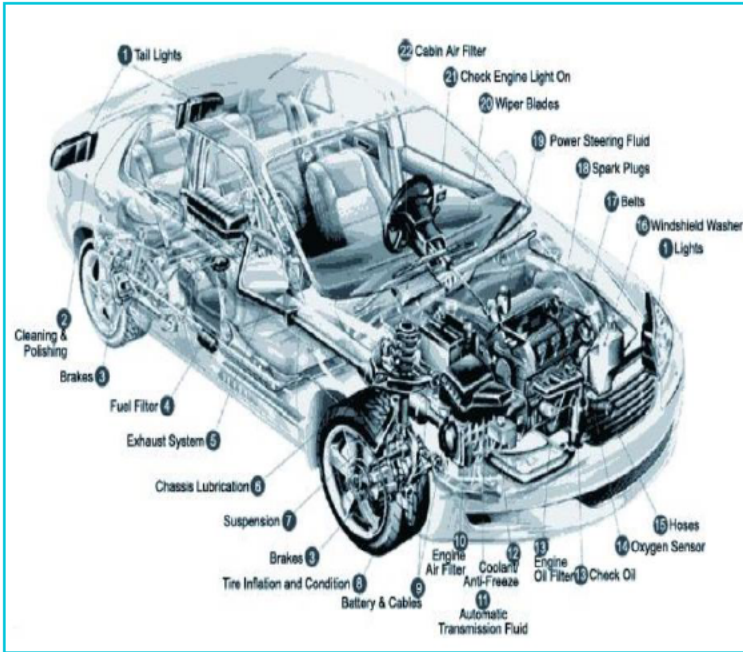
To modify existing cars takes even a couple of years longer

Today, for most impacted applications there are no technically mature alternatives available, design can not even start.



Unless we bring vehicles back from the 1930's (before PFAS was discovered). But not safe and durable....

ADEQUATE LEAD TIME FOR SUBSTITUTION WILL BE OF ESSENCE



Step 1 Alternatives

- Finding alternatives for all applications will be an immense feat.
- Alternatives must be available in sufficient quantity, acceptable quality and competitive price compared to the original material.

Step 2 Prototyping process

- Alternatives will be incorporated in impacted parts
- These parts need to be tested and have to pass for durability, safety and overall quality.
- Then we can talk about a **suitable alternative**

Both steps are important for defining adequate time for substitution, as the proposal only looks at step 1

EVEN ELECTRIFICATION IS AT STAKE



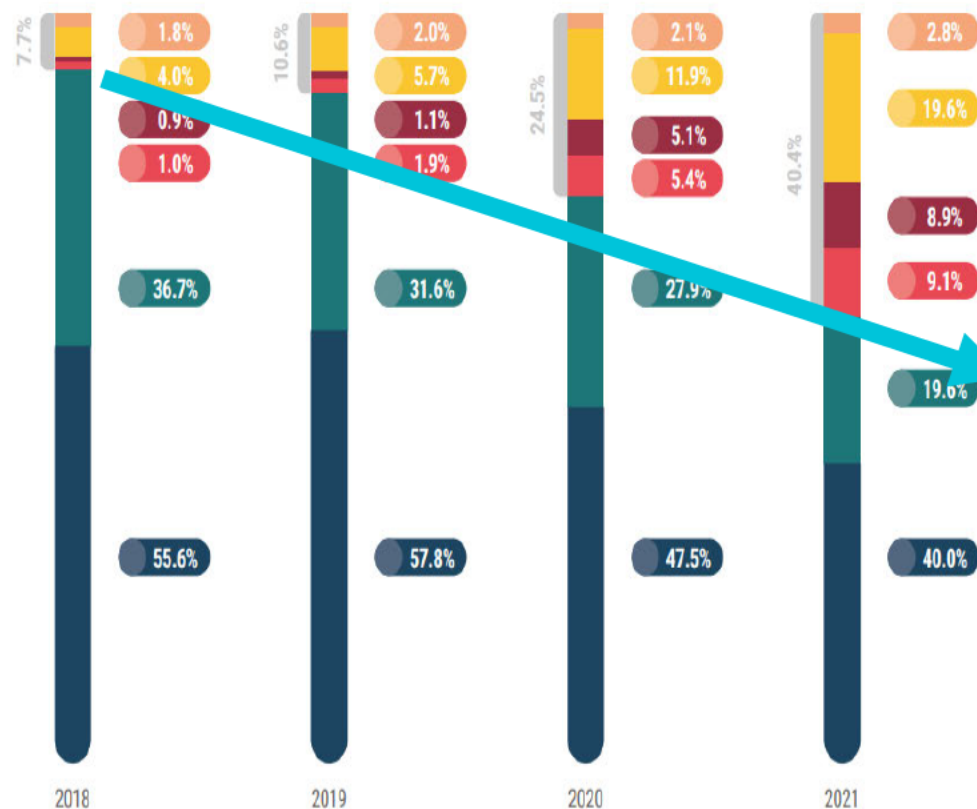
REGISTRATIONS

18% of all new cars sold in the EU in 2021 had a plug

NEW CARS IN THE EU¹ BY FUEL TYPE

Market share / 2018 - 2021

● Petrol ● Diesel ● Battery electric² ● Plug-in hybrid³ ● Hybrid electric⁴ ● Alternative fuels⁵ ● Total alternatively-powered vehicles



Recent years have seen exponential growth in the sale of electric vehicles

- The key technologies used to decarbonise road transport, improve range, and increased performance are highly depending on PFAS, specially fluoropolymers.

Transformation to a full electric vehicle fleet can not be achieved by 2035 with the current restriction proposal

1. Data for Bulgaria and Malta not available
2. Includes fuel cell electric vehicles
3. Includes extended-range electric vehicle
4. Includes full and mild hybrids
5. Includes natural gas, LPG and ethanol vehicles



TO REFLECT UPON



The current PFAS restriction proposal is not manageable for the automotive industry

- No new vehicles could enter the market
- Current vehicles cannot be repaired
- A huge challenge for green transition mobility



- ✓ **ACEA fully shares the desire to reduce the uses of PFAS in our industry.**
- ✓ **A balanced restriction will be crucial for the automotive industry, its green transition and its end users.**

Two dossiers submitted during the public consultation (May and Sept) with known uses and current knowledge on alternatives

PFAS restriction  aceea ACEA COMMENTS ON THE ANNEX XV DOSSIER OF THE UNIVERSAL PFAS RESTRICTION PROPOSAL September 2023 Second submission ACEA - European Automobile Manufacturers' Association	1. Machinery and equipment are long-term capital goods..... 1 2. Use of PFAS in machinery and equipment 1 3. Use of PFAS as process chemicals in production..... 1 4. Summary 1 ANNEXES..... 1 I. USES OF PFAS IN H₂ TANK STORAGE SYSTEM 1 II. ELECTRONICS IN AUTOMOTIVE INDUSTRY 1 III. LUBRICANTS..... 4 IV. NON-EXHAUSTIVE LIST OF APPLICATIONS OF FLUOROPOLYMERS AND FLUOROELASTOMERS..... 5 V. NON-EXHAUSTIVE LIST OF PFAS USED IN LACQUERS AND IMPACTED PARTS 5 VI. NON-EXHAUSTIVE LIST OF PFAS USED IN TEXTILES..... 5
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WHAT COULD BE A SOLUTION

Need for segmentation of the PFAS family

- A reduction of scope excluding non-hazardous PFAS such as fluoropolymers and fluoroelastomers is required. This would help to focus first on priority issues for which urgent action is needed, thus bringing a rational, efficient and methodological approach to the discussions.

Addition of derogations

- Application of a derogation for vehicles is crucial. This prevents that vehicles and millions of existing sub components that are already legally approved would have to be completely re-designed, re-tested and re-approved.

Adequate lead time for searching alternatives and the need for review clause.

- Adequate lead times where no alternatives are in place need to be respected together with implementing a revision clause to evaluate the progress after several years.

The repair-as-produced principle shall be applied.

- We believe the restriction should also not apply to spare parts produced after the rules enter into force. Parts should be repaired or replaced in line with the 'repair as produced' principle in order not to contradict the overall strategic goals of the circular economy

ABOUT THE EU AUTO INDUSTRY

- 13.0 million Europeans work in the automotive sector
- 11.5% of all manufacturing jobs in the EU
- €374.6 billion in tax revenue for European governments
- €101.9 billion trade surplus for the European Union
- Over 7% of EU GDP generated by the auto industry
- €59.1 billion in R&D spending annually, 31% of EU total



REPRESENTS EUROPE'S 14 MAJOR CAR, VAN, TRUCK AND BUS MANUFACTURERS

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