



EUROPEAN  
TYRE & RUBBER  
manufacturers'  
association

# ETRMA

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# Tyres and Road Wear Particles

MARII Summit on Microplastics – 16 October 2025

# ETRMA & Tyre Industry in Europe

# Members



## Full Members (14)



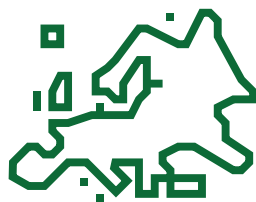
## National (Tyre) Associations & Affiliate Members (7)



# The European Tyre Manufacturing Industry



In 2023, around, **300 million** tyres were sold in the EU



**€12.2 billion** in tax revenues-enough to pay 295,000 workers in the teaching, health, and social care sectors.

In 2023, the EU tyre manufacturing industry supported:



**€43.9 billion** contribution to EU GDP



**Up 13%** relative to 2014



Direct: €13.9 bn

Indirect: €20.0 bn

Induced: €10.0 bn

## GLOBAL TRADE



**FINISHED GOODS**



**Exports**  
**€7.4 billion**



**Imports**  
**€6.9 billion**



**Trade surplus**  
**€0.4 billion**



**SUPPLY CHAIN**

**15%** of tyre manufacturers spend (**€4.2 billion**) was on imports-such as chemical products and natural rubber-from outside of the EU.

## R&D IMPACTS



The **€10.0 billion** R&D spending of ETRMA members between 2017 and 2023...



projected to boost the productivity of the EU economy by **€4.6 billion** in 2035.



Over **20,000** patents held by ETRMA members



**3.2x GDP multiplier**

For every **€1 million** directly generated by the tyre industry, a further **€2.2 million** was supported in the EU economy



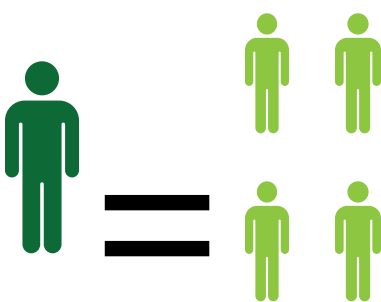
**498,000 jobs**



Direct: 112,000

Indirect: 259,000

Induced: 128,000



**4.5x employment multiplier**

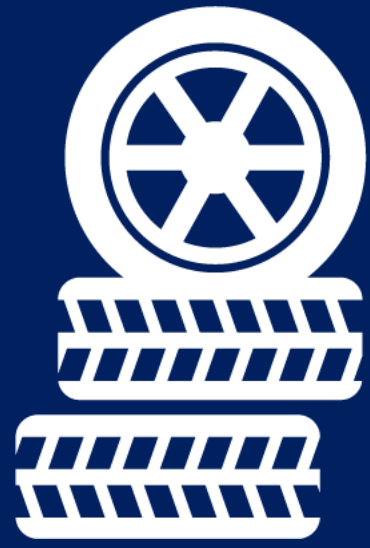
For every **1,000 jobs** directly employed an additional **3,500 workers** were supported in the EU economy.

**Note:** Unless otherwise specified, all values in this infographic relate to 2023, and all monetary values are measured in constant, 2023 prices. In other words, the impact has been adjusted for inflation using the EU whole-economy GDP deflator.

Totals may not sum due to rounding.

# About a Tyre

# About a Tyre



Tyres are complex, component rich and innovative products – designed to perform



The way tyres grip the road is critical for driving safety, performance and comfort

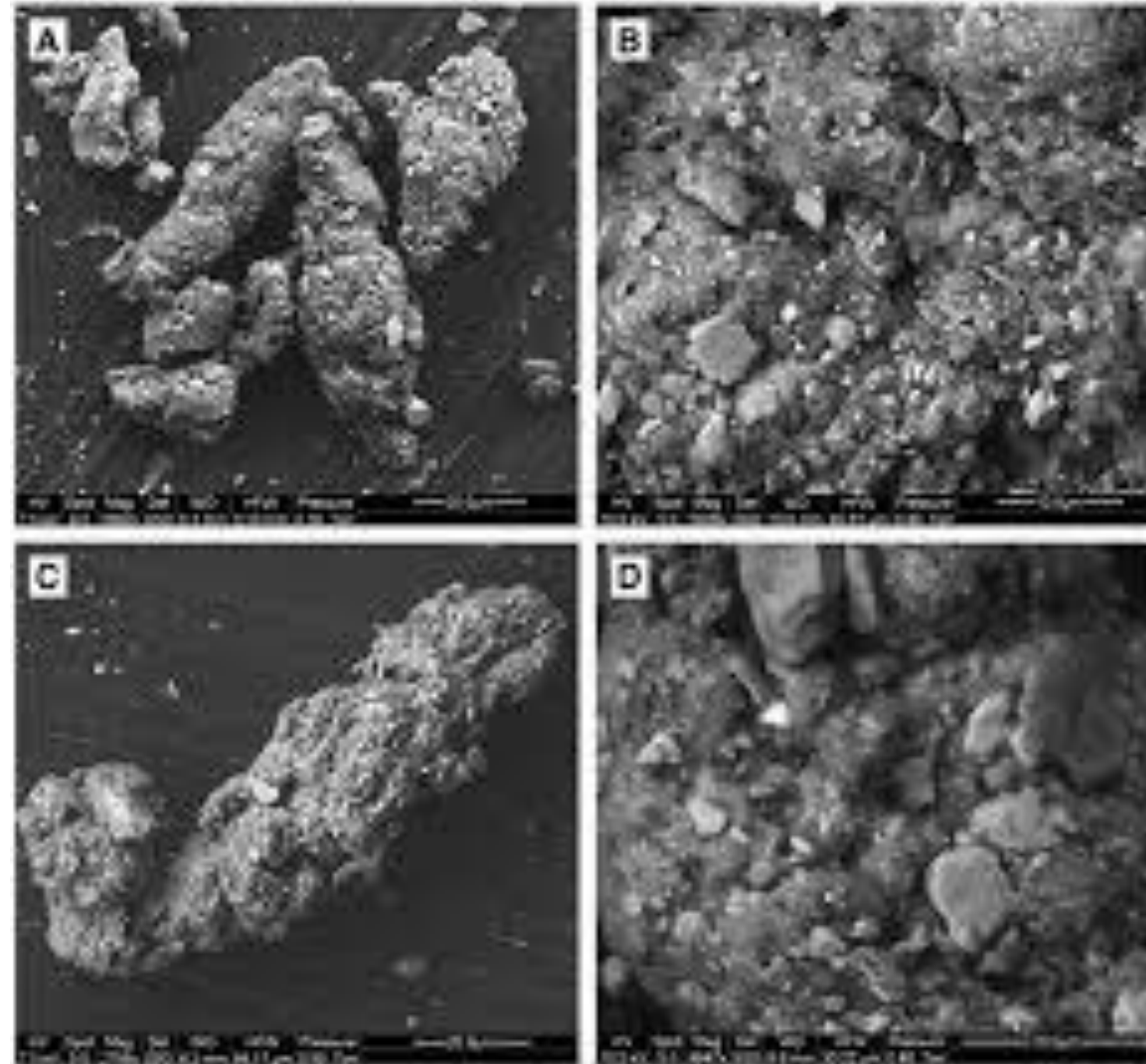
# Tyre Performance Requirements

- Gripping the road to steer, accelerate and brake;
- Performing in wet and wintry weather;
- Resisting heat and speed;
- Optimizing rolling resistance for more energy efficiency;
- Absorbing impacts and vibrations;
- Supporting vehicle weight;
- Providing a quiet ride; and
- Endurance and long-life.

TRWP

# Tyre and Road Wear Particles

- TWRP are **tiny debris** which are formed during normal driving conditions from the **friction between the tyre and the road necessary to ensure sufficient grip and safety**.
- The friction between tyre and road is essential to **ensure drivers' safety** and cannot be easily reduced.
- In addition, TRWP levels in the environment do not depend exclusively on tyre design but are affected by several external factors, such as driving behaviour, road and vehicle characteristics, wastewater treatment plants, etc.
- Typical characteristics of TRWP:
  - Elongated particles;
  - 50/50 mix of tyre and road pavement material; and
  - Primarily PM10.



**TRWP Platform**

# EUROPEAN TRWP PLATFORM



Launched by ETRMA in 2018, and facilitated by CSR Europe.

Connecting relevant stakeholders in Europe to address and better understand Tyre Road Wear Particles by:

- Sharing intelligence to build solid scientific knowledge;
- Engage all relevant parties to explore a balanced and holistic approach to TRWP mitigation options.

Digital meeting on 19/02 to discuss:

- Challenges and opportunities in quantifying TRWP and projects overview;
- Measuring and mitigating TRWP;
- Mitigation and quantification at local level.



**Participants:** European Commission| POLIS Network| Transport & Environment| EUPAVE | Open Universiteit | Ford/ACEA | Dutch National Institute for Public Health and the Environment (RIVM) | Concawe | Deltares | Nynas | EAPA | Joint Research Centre| Karlsruher Institut für Technologie (KIT) | Fraunhofer Institute | Swedish | Environmental Protection Agency | The Tire Collective | German Environment Agency | Demilieutafel | TU Berlin | Nynas | EurEau | ERF | University of Hannover | TNO | Eurocities | Hochschule Fresenius | Volkswagen | Umweltbundesamt | Aalborg University | German Ministry of the Environment | Hessian Ministry of Environment | WBCSD | Aalborg University | NIVA | Hochschule Fresenius

# Participants of the European TRWP Platform



## TYRE MAKERS

## ROAD SECTOR

## AUTOMOTIVE SECTOR

## DRIVING BEHAVIOUR

## WASTEWATER SECTOR

## CHEMICAL SUPPLIERS



## UNIVERSITIES & RESEARCH INSTITUTES

## CIVIL SOCIETY ORGANISATIONS



## EU INSTITUTIONS

## NATIONAL AUTHORITIES

# Regulation of TWRP

# EURO 7 AND ITS TYRE-RELATED OBJECTIVES



Sets a framework to translate in EU law the tyre abrasion limits that will be established at UNECE Level:

- Future EU limits will be aligned to those agreed at UN level, provided the respect of Euro 7 timelines.
- Limits will be set at UN level through an evidence-based market assessment.
- Implementation of tyre abrasion limits allows enough time for the industry to:
  - carry out tests on new C1 tyre types.
  - test all (and re-engineer if needed) existing types and
  - exhaust the stocks already on the market.

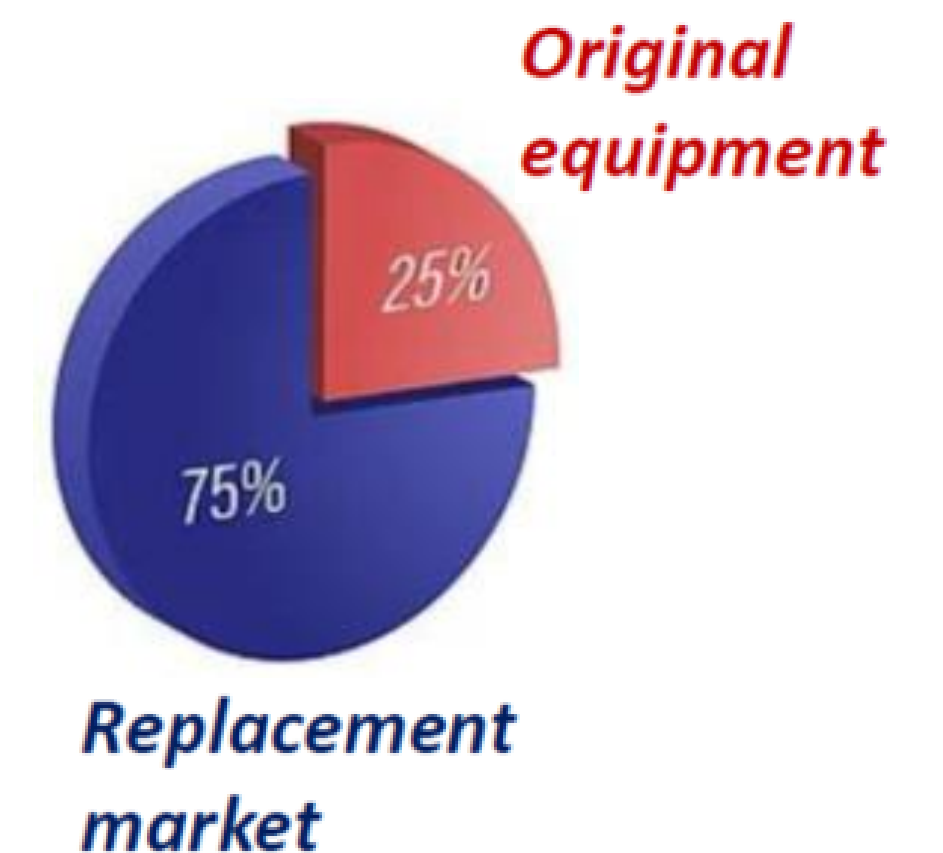


UN test methods for regulatory purposes are being developed to measure abrasion from passenger car tyres (C1), light truck tyres (C2) and heavy truck tyres (C3).

# WHY IS EURO 7 RELEVANT?



- Tyre abrasion as a non-exhaust emission is regulated for the first time.
- It applies to all tyres on EU market, whether mounted on Euro 7 vehicles or not.
- Its timeline incentivises the UN to work efficiently.
- The market assessment will show how tyres currently on the EU market perform against the tests that will be carried out at UN level for C1 tyres.
- A global industry needs global regulations:
  - To work in the same framework and be aligned with other performances.
  - To prevent future trade barriers.



## WHY IS EURO 7 RELEVANT?

- Test methods for C1 tyres adopted in February 2025 in UN GRBP:
  - Circuit on open public road with boundary conditions to ensure reproducible conditions.
  - Indoor drum laboratory test.
- By 2026, EU regulators will decide on C1 tyre abrasion limits based on the market assessment.
  - Outdoor testing on approximately 180 tyres.
- C2 and C3 test methods will be adopted by 2026 and 2028, respectively.
- C2 and C3 tyre abrasion limits will follow by 2028 and 2030, respectively.



# Tyre Industry proposal<sup>1</sup> – a comprehensive package

| ETRTO limits proposal **** (vehicle method)                               |                                     |            |               |            |               |            |                         |
|---------------------------------------------------------------------------|-------------------------------------|------------|---------------|------------|---------------|------------|-------------------------|
|                                                                           |                                     | Core limit | Stage 1       |            | Stage 2       |            | EU Market share***      |
|                                                                           |                                     |            | co-chairs     | ETRTO*     | co-chairs     | ETRTO*     |                         |
| Margin by tyre category of use                                            |                                     |            |               |            |               |            |                         |
| Normal                                                                    |                                     | 1,0        | [0,2]         | 0.25       | [0.15]        | 0,15       |                         |
| Snow                                                                      |                                     | 1,0        | [0,2]         | 0.25       | [0.15]        | 0,15       |                         |
| Special use                                                               |                                     |            | [Not defined] | [exempted] | [Not defined] | [exempted] | 0,7%                    |
| Allowances for specific tyre groups                                       |                                     |            |               |            |               |            |                         |
| Tyre for use in severe snow conditions (3PMSF)                            |                                     |            | +0.10         | +0.10      | [+0.10]       | +0.10      | 35,0%                   |
| Reinforced or extra load tyre (XL)                                        |                                     |            | +0.10         | +0.10      | [-]           | +0.10      | ~50%                    |
| Tyres with a nominal aspect ratio ≤ 40 and suitable for speeds ≥ 300 km/h |                                     |            | +0.10         | +0.10      | [-]           | +0.10      | 7,2%                    |
| [Tyres with low load index (LI < 77)]                                     |                                     |            | +0.10         | +0.10      | [-]           | +0.10      | < 2% (decreasing trend) |
|                                                                           | removal rate                        |            | 32%           | 23%        | 44%           | 36,5%      |                         |
|                                                                           | removal rate between stages 1 and 2 |            |               |            | 12%           | 13,5%      |                         |
|                                                                           | emission reduction (**)             |            | ~11%          | ~8%        | ~15%          | ~12%       |                         |
| * Not endorsed by a tyre manufacturer                                     |                                     |            |               |            |               |            |                         |
| ** Estimation based on JRC assumptions                                    |                                     |            |               |            |               |            |                         |
| *** based on ETRMA EUROPOOL                                               |                                     |            |               |            |               |            |                         |
| **** for stage 2 and it should be 5 years between the 2 stages            |                                     |            |               |            |               |            |                         |

- Limits only feasible if conditions are considered together:
- Two implementation stages (5 years apart)
  - Allowances maintained also in stage II for special tyres
  - Open road vehicle method as reference; drum test only if correlation proven through a working plan currently being agreed.

Close

