

TIRE POLLUTION

WHAT HAPPENS WHEN
THE RUBBER MEETS THE ROAD

[CLICK FOR VIDEO](#)

TIRE POLLUTION IS ENORMOUS + GROWING PROBLEM

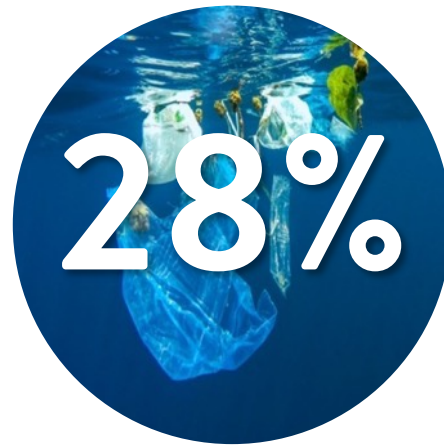
Tires are made from carbon-intensive fossil fuels, and are a major source of CO₂ emissions, particulate-matter (PM) air pollution in our cities, microplastic pollution in our oceans, and are hugely wasteful at their end-of-life.



TIRES CAUSE AIR POLLUTION

TIRE PM IS 6X EURO6
TAILPIPE PM LIMITS

[UNECE](#) / [DEFRA](#)



TIRES GENERATE PLASTIC POLLUTION

28% OF ALL OCEAN
PRIMARY MICROPLASTICS

[IUCN](#)



TIRES ARE CARBON INTENSIVE + WASTEFUL

2 BILLION MADE +
WASTED EACH YEAR

INDUSTRY DATA

THE TIRE INDUSTRY MODEL DRIVES THE PROBLEM

More than 50% of all tires are produced by the Top-5 players, while tire distribution remains highly fragmented with multiple intermediaries – a supply chain that incentivizes high volumes of low-quality, highly polluting tires.

BRIDGESTONE

MICHELIN

GOODYEAR

Continental

Sumitomo



CONSOLIDATED PRODUCTION

HIGHLY CONCENTRATED
TOP-5 = +50% MARKET

COMPLEX DISTRIBUTION

HIGHLY FRAGMENTED
INDEPENDENT PLAYERS

HIGH VOLUMES = HIGH POLLUTION

LARGE VOLUMES OF
LOW-QUALITY TIRES



EVS + TIRE WEAR

EV TIRES POLLUTE MORE

“UP TO 20% FASTER”

MICHELIN

“UP TO 50% FASTER”

GOOD YEAR

Certified



Corporation

A close-up, black and white photograph of a tire tread. The tread pattern is visible, showing several longitudinal grooves. A thick plume of white smoke or steam is rising from the center of the tire, partially obscuring the tread. The background is dark and out of focus.

QUESTIONS ON TIRE WEAR

WHAT IS IT MADE OF?

WHERE DOES IT GO?

HOW LONG DOES IT STAY?

WHAT HARM DOES IT DO?



BETTER EV TIRES

DIRECT TO CUSTOMERS

DRIVEN BY SUSTAINABILITY *

- ONLY CERTIFIED B-CORPORATION
IN THE GLOBAL TIRE INDUSTRY



BETTER TIRES = MORE EV RANGE + LESS POLLUTION

EVs generate more tire pollution (20-50%) due to their greater weight and torque – so the ideal EV tire needs to address its environmental and health impact, while delivering EV performance and cost benefits to customers.



MORE EV RANGE
= 10-20% LESS KWH

TO INCREASE EV-RANGE
+ SAVE ENERGY COSTS

LESS POLLUTION
= 30-50% LESS PM

TO IMPROVE DURABILITY
+ REDUCE TIRE POLLUTION

NET-ZERO TIRES
= CARBON NEUTRAL

TO REDUCE CO2 EMISSIONS
FROM MFG + END OF LIFE



REDUCING TIRE POLLUTION + TOXICITY

ENSO is focused on reducing the enormous volume of tire PM pollution and deploying novel technologies to first reduce and then ultimately remove toxic materials from tire formulations, including 6PPD and Zinc Oxide.



TIRE PARTICULATE MATTER POLLUTION

MAJOR SOURCE OF AIR +
MICRO-PLASTIC POLLUTION



6PPD QUINONE

TOXIC TO COHO SALMON
+ WIDER ENVIRONMENT



ZINC OXIDE (ZNO)

TOXIC TO MICROSCOPIC
+ AQUATIC ORGANISMS

DIRECT TO CUSTOMERS + TIRES AS A SERVICE

ENSO's Direct-to-Customer (D2C) Tires-as-a-Service (TAAS) model captures higher margins per EV tire, offering superior EV performance and low particulate matter (PM) emissions at a competitive price per mile.



**DIRECT TO CUSTOMER
AT A LOWER TCO**

SUPERIOR EV PERFORMANCE
+ COMPETITIVE PRICING



**PAY-PER-MILE
TIRES AS A SERVICE**

HIGHER MARGINS
+ ZERO UPFRONT COST



**HIGH MILEAGE
= LOW PM POLLUTION**

EFFICIENT, DURABLE
+ LOW-EMISSION TIRES



COMMERCIAL ROLL-OUT

ENSO works with DPD and Royal Mail in London FreightLab, as well as with LEVC and ZETI on electric taxis, to deploy its tires at scale, ahead of its wider commercial roll-out targeting large electric vans in UK + USA in 2023.



LONDON FREIGHTLAB
2020-2022



ELECTRIC TAXIS
2022-2023



ELECTRIC VANS
2023-2024

WITH UK + CALIFORNIA
EV FLEET PARTNERS





**WHAT CAN
WE ALL DO?**

DRIVE LESS

DRIVE MORE CAREFULLY

DRIVE LIGHTER CARS

BUY BETTER TIRES



WHY BETTER TIRES?

LESS TIRE POLLUTION
+
MORE EV RANGE / LESS FUEL
+
REDUCE OPERATING COSTS



**TEAM
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