



Hidden Source Fuels 30% of Microplastics Globally

Description

Annually, billions of vehicles across the globe release an estimated [6 million tonnes](#) of tire debris. These minuscule plastic fragments, resulting from the inevitable wear associated with regular driving, gradually infiltrate our soil, waterways, and even the food we consume. Recent research conducted in [South China](#) revealed the presence of tire-derived chemicals in a significant proportion of human urine samples.

Tire particles represent a substantial yet frequently unacknowledged source of microplastic pollution, constituting approximately [28 percent of all microplastics](#) released into the environment worldwide. Despite the magnitude of this issue, tire pollution is seldom scrutinized as a distinct category and is often relegated to a broader classification of microplastics, despite their unique properties necessitating specialized consideration.

It is imperative that we establish tire particles as an independent category of pollution. In a recent [international study](#), my colleagues and I posited that such classification would catalyze targeted research initiatives, thereby informing policies aimed specifically at mitigating tire pollution. Enhanced public awareness is equally crucial in addressing this pressing environmental concern.

Currently, representatives convene in South Korea to negotiate a [global treaty on plastic pollution](#). While this historic agreement is set to encompass various facets of plastic waste, tire pollutants remain largely [absent from discussions](#). Acknowledging tire pollution as a distinct issue may unlock targeted solutions and heighten public consciousness, an essential step in combating this escalating environmental threat.

Vocabulary List:

1. **Infiltrate** /'ɪn.flɪ.trɪt/ (verb): To penetrate or gain access to gradually especially in a harmful way.
2. **Constitute** /'kɒn.stɪ.tju:t/ (verb): To be a part of a whole; to form or compose.
3. **Implication** /,ɪm.plɪ'keɪ.ʃən/ (noun): A likely consequence or effect of something.
4. **Acknowledge** /ək'nɒl.ɪdʒ/ (verb): To recognize the existence or truth of something.
5. **Catalyze** /'kæt.ə.laɪz/ (verb): To cause or accelerate an event or change.
6. **Ascertain** /,æ.s.ə'teɪn/ (verb): To find out or discover something with certainty.

Comprehension Questions



Multiple Choice

1. What is the estimated amount of tire debris released annually by billions of vehicles globally?
 - Option: 1 million tonnes
 - Option: 3 million tonnes
 - Option: 6 million tonnes
 - Option: 10 million tonnes

2. According to recent research in South China, what was found in a significant proportion of human urine samples?
 - Option: Heavy metals
 - Option: Tire debris
 - Option: Microplastics
 - Option: Pesticides

3. What percentage of all microplastics released into the environment worldwide do tire particles constitute?
 - Option: 10 percent
 - Option: 20 percent
 - Option: 28 percent
 - Option: 35 percent

4. In which area do tire particles infiltrate as mentioned in the text?
 - Option: Atmosphere
 - Option: Soil, waterways, food
 - Option: Building structures
 - Option: Electronic devices

5. What type of study was mentioned in the text to propose the establishment of tire particles as an independent category of pollution?
 - Option: National study
 - Option: Regional study
 - Option: International study
 - Option: Local study

6. Where are representatives currently convening to negotiate a global treaty on plastic pollution?
 - Option: Japan
 - Option: South Korea
 - Option: United States



Option: Germany

True-False

7. Tire pollution is commonly scrutinized as a distinct category.
8. Enhanced public awareness is not crucial in addressing tire pollution.
9. Tire pollutants have been prominent in discussions related to a global treaty on plastic pollution.
10. Tire particles are often classified under a broader category of microplastics.
11. Microplastics originating from tires necessitate specialized consideration.
12. Acknowledging tire pollution as a distinct issue may raise public consciousness.

Gap-Fill

13. Recent research conducted in South China revealed the presence of tire-derived chemicals in a significant proportion of human _____ samples.
14. It is imperative to establish tire particles as an independent category of pollution in order to catalyze targeted research initiatives and inform policies aimed at mitigating tire pollution. Enhanced public awareness is equally crucial in addressing this pressing environmental _____.
15. Currently, representatives convene in _____ to negotiate a global treaty on plastic pollution.
16. Tire pollution is seldom scrutinized as a distinct category and is often relegated to a broader classification of _____.
17. Acknowledging tire pollution as a distinct issue may unlock targeted solutions and heighten public



consciousness, an essential step in combating this escalating environmental _____.

18. Tire particles represent a substantial yet frequently unacknowledged source of microplastic pollution,

constituting approximately 28 percent of all microplastics released into the environment

_____.

Answer

Multiple Choice: 1. 6 million tonnes 2. Tire-derived chemicals 3. 28 percent 4. Soil, waterways, food
5. International study 6. South Korea

True-False: 7. False 8. False 9. False 10. True 11. True 12. True

Gap-Fill: 13. urine 14. concern 15. South Korea 16. microplastics 17. threat 18. worldwide

Vocabulary quizzes

Multiple Choice (Select the Correct answer for each question.)

1. Which word means to make up form or establish?

- Option: Acknowledge
- Option: Constitute
- Option: Catalyze
- Option: Ascertain

2. Which word refers to a sequence of actions performed in a customary way?

- Option: Extravagant
- Option: Ritual
- Option: Enigmatic
- Option: Flavored

3. Which term is used to describe the magnetic field around a planet?

- Option: Diffraction
- Option: Temporal
- Option: Magnetosphere
- Option: Uncertainty

4. Which word means mysterious or puzzling?

- Option: Innovative



- Option: Probabilistic
- Option: Facilitating
- Option: Enigmatic

5. Which term refers to the microorganisms in a particular environment?

- Option: Interference
- Option: Microbiome
- Option: Interpersonal
- Option: Elucidated

6. Which word means to secretly enter or penetrate?

- Option: Implication
- Option: Acknowledge
- Option: Infiltrate
- Option: Catalyze

7. Which term describes substances that cause hallucinations?

- Option: Ritual
- Option: Extravagant
- Option: Hallucinogenic
- Option: Enigmatic

8. Which word refers to substances released into the air?

- Option: Interference
- Option: Magnetosphere
- Option: Emissions
- Option: Diffraction

9. Which term relates to the likelihood of an event occurring?

- Option: Temporal
- Option: Uncertainty
- Option: Innovative
- Option: Probabilistic

10. Which term refers to illnesses or diseases?

- Option: Correlating
- Option: Phenomenon
- Option: Ailments
- Option: Elucidates

Gap-Fill (Fill in the blanks with the correct word from the vocabulary list.)



11. His absence from the meeting had serious _____ for the project.
12. It is important to _____ your mistakes and learn from them.
13. The investigation aimed to _____ the truth behind the mysterious disappearance.
14. The new innovation is expected to _____ growth in the industry.
15. The chef prepared a special _____ of exotic flavors for the event.
16. The professor's explanation fully _____ the complex theory.
17. The radio reception was disrupted by _____ from nearby electrical devices.
18. The data analysts are tasked with _____ the trends in customer behavior.
19. The training workshop focused on _____ effective communication skills.
20. The sudden increase in online shopping is a notable _____.

Matching Sentences (Match each definition to the correct word from the vocabulary list.)



21. The royal family lived a life of luxury often indulging in lavish and costly purchases.
22. The concept of time and its relation to events is explored in the study of dynamics.
23. The company introduced an approach to product design revolutionizing the market.
24. The chef created a new dish with a unique profile combining sweet and spicy tastes.
25. The outcome of the experiment was met with due to conflicting results.
26. Effective managerial skills involve understanding relationships within a team.
27. The artist's paintings were known for their themes leaving viewers questioning the meaning.
28. Light passing through a narrow slit demonstrates the principle of .
29. The concept of time and its relation to events is explored in the study of dynamics.
30. Weather forecasting involves analyzing models to predict future conditions.

Answer

Multiple Choice: 1. Constitute 2. Ritual 3. Magnetosphere 4. Enigmatic 5. Microbiome 6. Infiltrate
7. Hallucinogenic 8. Emissions 9. Probabilistic 10. Ailments

Gap-Fill: 11. Implication 12. Acknowledge 13. Ascertain 14. Catalyze 15. Concoction 16. Elucidates
17. Interference 18. Correlating 19. Facilitating 20. Phenomenon

Matching sentence: 1. Extravagant 2. Temporal 3. Innovative 4. Flavored 5. Uncertainty 6. Interpersonal
7. Enigmatic 8. Diffraction 9. Temporal 10. Probabilistic

CATEGORY

1. Sci/Tech - LEVEL5

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