



Conductive Clean Super Elastic Tires

A miracle or reality?

Tire applications for the use in industries with special cleanliness and safety requirements such as chemical, pharmaceutical, automotive, solar, optical, food, paper, and aerospace industries are a challenge for developers and engineers. Special clean tires are often used in these areas to reduce the contamination caused by tire tracks. At the same time tires generate static electricity by friction during operation. This static electricity can lead to safety problems, driver injuries, vehicle or plant damages and breakdowns. To minimize the risk of injury and damage, the use of standard black or anti-static tires in addition to the vehicle grounding strip or chain is recommended.

What are the differences of clean, standard black and anti-static tires in terms of conductivity?



Clean Tires - Non-conductive

Clean tires are non-marking and therefore especially designed for areas that are sensitive to dust and dirt. Thanks to the special tread compound and its light color, they **can reduce visible tire marks** on the floor and thus soiling of the production and storage areas.



Standard Black Tires - Conductivity $< 10^{10} \Omega$

Standard black tires permanently **transfer the accumulated static charge to the floor** and thus **minimize the safety risk** for man, machine and product. Continental recommends that anti-static tires should be used in preference to standard black tires, if static charge is to be reduced or prevented.



Anti-Static Tires - Conductivity $< 10^6 \Omega$

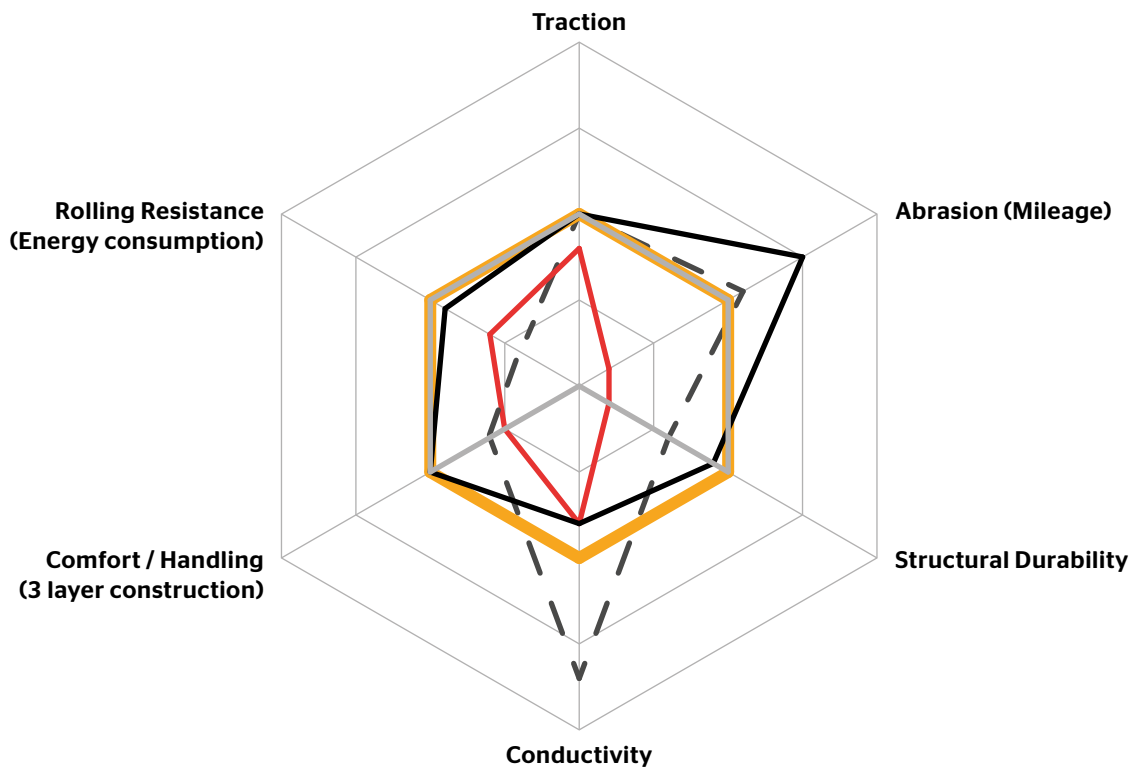
The **risk of a sudden electrical discharges is reduced to a minimum** with anti-static tires. Thanks to a special rubber compound or special built-in features, which offer the highest conductivity. In combination with the vehicle a permanent grounded system can be achieved. Regulatory requirements to operate in EX areas (i.e. chemical industry) can make the use of anti-static tires compulsory. The anti-static feature can also be realized via different grounding technologies on the vehicles, but the vehicles need to be equipped for anti-static use. Continental recommends that anti-static tires should be used in preference to standard black tires, if static charge is to be reduced or prevented.

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Non-marking tires are non-conductive. **In case of non-marking tire usage, Continental recommends additional grounding technologies on the vehicle to ensure conductivity of the vehicle-tire-system** as we believe that the individual benefits of both tire solutions (non-marking & conductivity) outweigh the benefits of a combined solution. Please check the vehicle manufacturer's advise/instruction for grounding details.

Tire performance in comparison



— SC20+ (Standard Black) — SC20 Clean - - SC20 Anti-Static — SC20 Clean & Vehicle grounding — Estimated conductive clean performance

Benefits of Clean Tires

- › Developed for areas that are sensitive to dust and dirt
- › Easy recognition at first glance thanks to their characteristically light colored rubber compound
- › Reduction of visible tire marks on the floor and soiling of the production and storage areas to a minimum.

Benefits of Standard Black / Anti-Static Tires

- › Most convenient feature for the user
- › Protection for user, product and equipment from static electricity
- › Prevent uncontrolled electric discharges, which may cause dangerous sparks

In case of any further question or comments, please contact your local Continental Sales Person or Technical Customer Services Representative. Performance based on SC20 Clean and vehicle grounding, all additional values in correlation.