

Protecting EV Charging Stations from Wear & Tear



Fast, convenient charging stations are in high demand as electric vehicle (EV) ownership is aggressively expanding around the globe. Building durable, long-lasting EV charging stations that can withstand harsh environmental elements and rough handling requires high-performance materials.

Challenge: Premature Wear and Tear



Accessible public charging stations are in demand, but they are triggering an industry challenge – premature wear and tear.

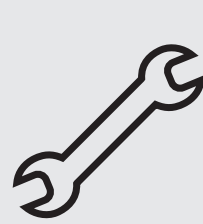
Charging stations are routinely impacted by weather, vandalism, accidents, creep, etc. In fact, after just 6 months of use, many charging plugs show significant signs of deterioration, leading to:



Reduced impact strength



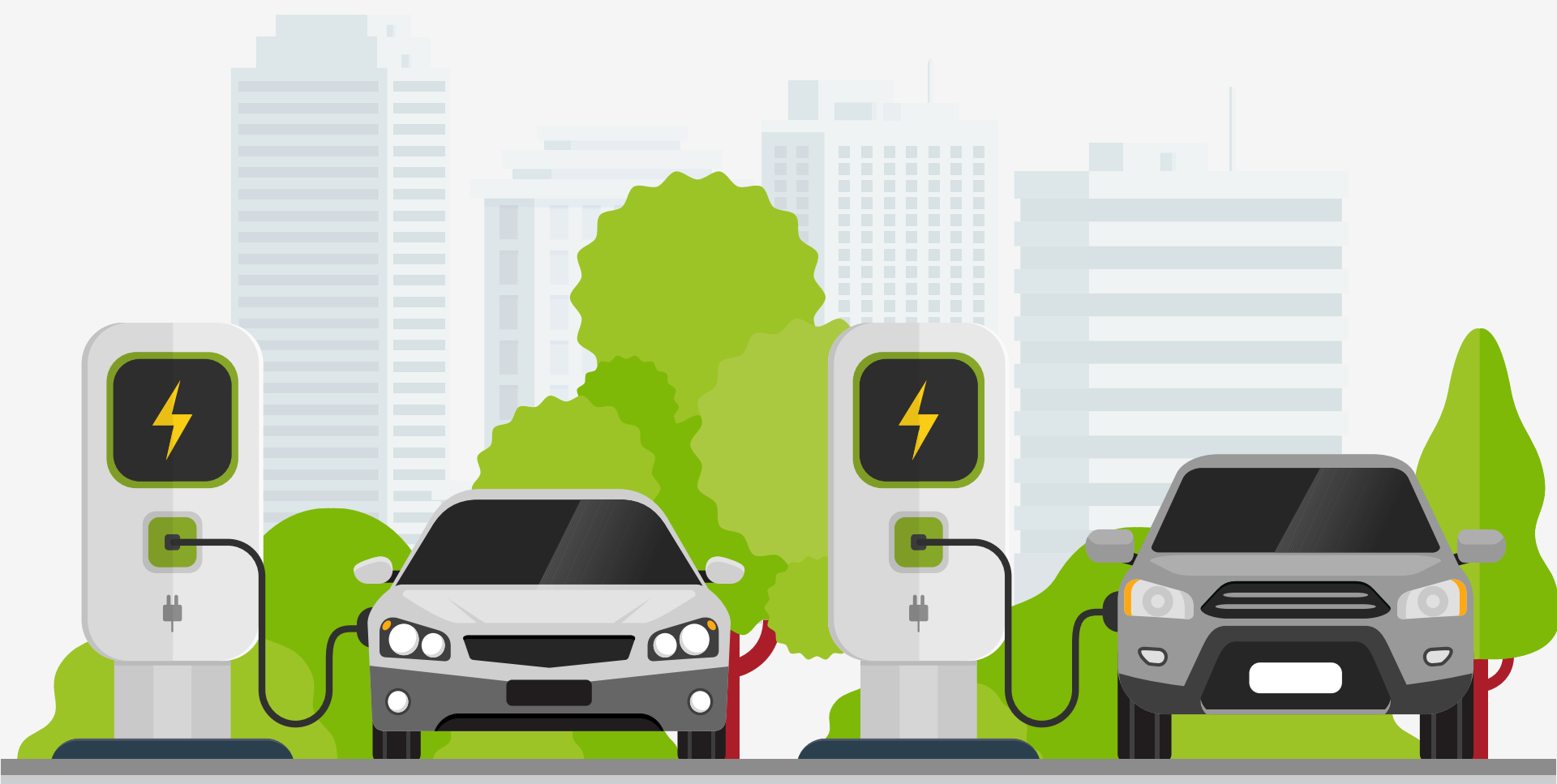
Increased exposure to fire, electrical safety, and shock hazards



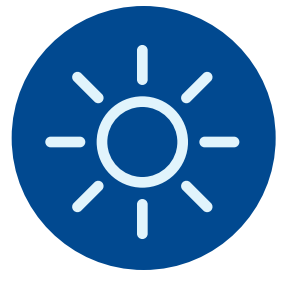
The need for more frequent repairs

Key Considerations in Material Selection

There is a clear need for high-end, quality materials in manufacturing EV charging ports and stations. Many manufacturers are turning to DSM Engineer Materials' Akulon® PA6 and PA66 materials, which offer a superior and proven alternative to common fire retardant (FR) materials. Akulon is lighter, more durable, and easier to fabricate.

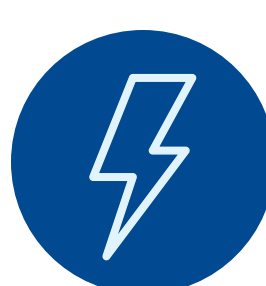


Akulon®



Touch screen display cover

- Scratch & crack resistant
- Durable & long lasting
- Protects from harsh environmental elements



EV charging plug & housing:

- Fully compliant with UL and IEC regulations
- Better overall mechanical performance
- Proven reliability
- Creep resistant



Front and back panels:

- Improved aesthetic design options
- More flexibility in color choices
- Weather & UV resistant
- Higher impact & toughness

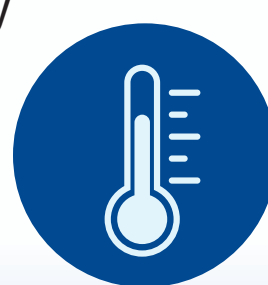


Base:

- Best-in-class strength & durability
- Impact resistant
- Weather & UV resistant
- Higher impact & toughness

EV charging socket:

- Temperature resistant
- Best-in-class strength & durability



Learn more about EV charging material solutions at DSM