

## Rail & Mass Transit

### Case Study: Light Rail Power Unit Seal

Light rail is an essential part of transportation networks in major cities. It reduces traffic in congested urban corridors and provides a safe and reliable alternative to private cars.

Engineers continuously improve designs using innovative materials and sustainable, energy-efficient technologies. They aim to create a better product that meets the evolving needs of commuters.

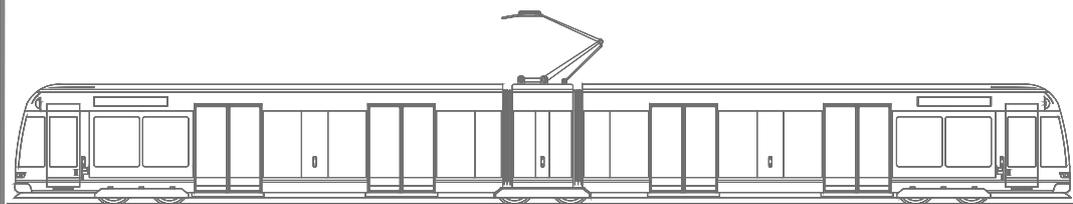
Producing high-quality materials for critical components is essential for driving innovation, with safety being the top priority.

When approached to assist in the design of a light rail system, Silicone Engineering prioritises safety, longevity, and future-proofing, considering the operating lifespan of the system.

### The Opportunity & Challenge

We recently received a request from a company looking for a material to seal the power unit boxes on the rooftop of their light rail train system.

The material needed to comply with the stringent industry regulation UL 94 V-0, and the company provided us with design plans to create a custom seal. The material had to possess low smoke and low toxicity properties and withstand occasional abrasion, fluctuating temperatures, and environmental weathering resistance.





## The Solution: **kSil® V-0 70**

Our material engineers got to work and offered our best-fitting silicone material for the Power Box sealing function.

Based on the client's requirements for strong abrasive resistance, our engineering team decided to use kSil® V-0 70 for the power box. This material was chosen because it has the necessary EN45545-2, NFPA-130, and UL94-V-0 certifications and can withstand the application's physical demands and the weathering that an inner city light rail system can encounter.

The material is currently undergoing a long-term trial, and if it proves successful, it will be incorporated into the future drawings for the light rail power box.

Click the links for more silicone rail applications: <https://silicone.co.uk/industries/rail-mass-transit/>

**Rail**

**Power Box Seal**

**Long life Service**

**Temperature Range**  
-60°C to 230 °C  
-76°F to 446°F

**Flame Retardant**  
UL 94 V0  
FAR 25/ JAR 25