

## A system to clean and protect

The SPL Chemical Immersion Cleaning process effectively removes paint, grease, oil, underseal, filler, anti-flutter, adhesives and the majority of all rust from panels, parts and complete bodysHELLS. With close to 3000 shells treated, it is widely accepted as the safe and trusted alternative to all types of media blasting. Once clean, SPL offers



advanced corrosion protection in the form of electrophoretic coating (or e-coating) to prevent its return.

## 911 rot spots

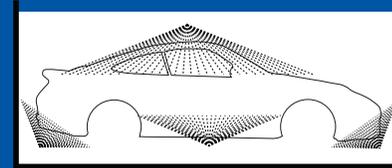
Despite the increasing use of galvanised steel, Porsches still rust. From the common sills & kidney bowls on 911s to the screen apertures & inner quarters of 964s & 993s, these cars can rot in a multitude of places all around the shell, making a fully immersive process even more appealing and more penetrative. Rust within the hidden recesses such as the 'C' pillars in the 911 cannot be dealt with by conventional cleaning or blasting methods. With experience, and its proprietary immersive techniques, SPL can effectively identify and clean even hidden areas.



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## The Cleaning and Protection Processes

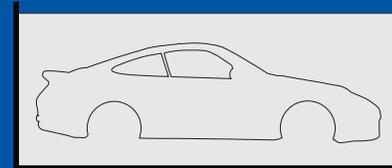
### Stage 1. Decontamination



advanced dehydration process.

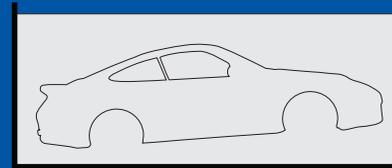
Heavy organic coatings including underseal, filler, mastic sealants, anti-vibration materials and adhesives are broken down using SPL's

### Stage 2. Organic Material Removal



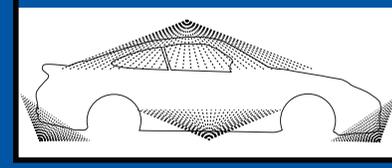
The remaining organic compounds such as paint, grease, oil and carbon are now removed in an alkaline hydrocarbon solution for prior to a water rinse.

### Stage 3. Rust Removal



Corrosion is now removed via immersion in a dilute solution of inhibited hydrochloric acid. Inhibitors prevent the acid from attacking 'good metal', only breaking down the corrosion. Tilting the shell back-and-forth within the solution improves penetration and helps displace air locks. SPL is happy to advise the best ways to attack inaccessible areas on even rare or unusual cars.

### Stage 4. Passivation Rinse

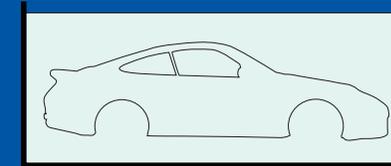


An advanced agitated alkaline neutralisation and passivation immersion process follows. To ensure maximum penetration, a neutralising preservative is applied by hand, into the seams and recesses leaving the shell bright and stable. SPL recommends the shell be weld repaired at this stage, before a repeat of stages 3 and 4 prior to electrophoretic coating.

## The Electrophoretic or E-Coating System

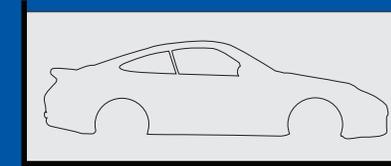
E-coating is widely regarded as the best available anti-corrosion primer paint for mild steel and is relied upon by nearly all today's car makers to offer corrosion resistance.

### Stage 1. Pre-Treatment



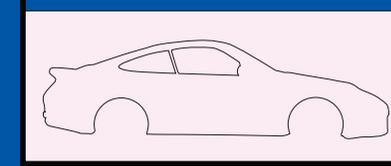
A thorough eight step process covering cleaning, conditioning and phosphating. The cleaning process utilises varying strength alkaline silicate solutions at 50°C to remove oil and grease followed by water rinses. Following a conditioner rinse, the shell is immersed in a bath of zinc, manganese and nickel (tri-cation) phosphate solution. Water rinses remove the excess phosphate solution and finally the shell is rinsed with demineralised water.

### Stage 2. Electrophoretic Deposition



Next, the shell is fully immersed in a 33°C 55,000 litre PPG paint tank. Experience ensures a highly uniform paint film of between 22 µm and 28 µm with excellent bond strength is achieved as an electrical current of around 400 volts and 600 amps is passed through the shell. An Ultra Filtrate molecular resin solution rinse is then applied prior to curing.

### Stage 3. Curing



The shell passes through a high temperature oven at 180°C for 45 minutes. This will cross-link the polymer resin allowing the coating to become smooth and continuous. Crucially, the controlled heat drives out residual moisture from within the seams and box sections.