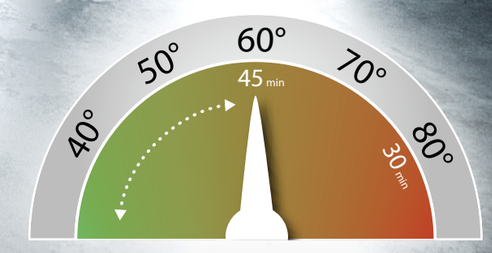
Working on an Electric Vehicle (EV)?



These are things you need to think about…

General Recommendation: drying temperature must stay below 60°C and cannot exceed 45 min. If in doubt, contact the vehicle manufacturer for detailed information.

Before you start:		
1. Assessment	Only qualified personnel are permitted to work on HV vehicles.	• Observe country specific electric vehicle safety regulations (e.g. DGVU 209-93) • Observe the specifications of the respective vehicle manufacturer**
2. Classification	**Classify as one of the following:** • Electric vehicle HV • Fuel cell vehicle • Hybrid	
3. Risk assessment	**Check for:** 1. Evidence of fire 2. Detectable sparks, smoke or steam 3. Noise from battery, e.g. crackling 4. Acrid odour 5. Fluid leaks from or in battery 6. Severe mechanical damage to battery 7. Continuous temperature measurement (<60°C)	• Vehicle pre-check measurement technology: Release for repair? Yes/No. • Visual inspection: Release for repair? Yes/no.
4. Repair release	**Decide:** ✓ Vehicle can be repaired without risk × Vehicle cannot be released	• Send the vehicle to the workshop* • Vehicle must be placed in a quarantine area

While spraying:			
1. Preliminary work	• Only qualified personnel should drive the vehicle (e.g. in the workshop) • HV system can only be deactivated for the pending repair work by a qualified person	• Work on voltage-free bodies (body/mechanics/paint) can now be carried out by qualified personnel	Observe vehicle manufacturer current specifications for loading, lifting and manoeuvring**
2. Painting/prep	• Battery temperature: <30°C. • Battery charge status: min 45%	• Remove ignition key (do not switch on aircon system) • Lower the windows to avoid heat build-up	Observe the specifications of the vehicle manufacturer**
3. Painting/drying	If possible, use Speed-TEC System. Drying temperature must stay below 60°C and cannot exceed 45 min.		
4. Reassembly	Assembly work after painting must be done by qualified personnel. Recommissioning and acceptance only by qualified personnel.		

On completion:		
Finishing	Must be done by qualified personnel.	Observe vehicle manufacturer specifications**
Handover to customer	Charging battery and manoeuvring must be done by qualified personnel.	

* Only after instruction by a qualified person ** Vehicle manufacturer specifications must always be up-to-date

Remember!

- Only qualified personnel may work on EVs
- Only trained personnel (according to local requirements) should de/reactivate high voltage
- Observe country specific electric vehicle safety regulations (e.g. DGVU 209-93)
- Make sure cabin temperature is set correctly – use an I.R. thermometer to check
- Do not exceed baking time and temperature
- Comply with general EV safety rules:
  - Ensure that the vehicle cannot be switched on accidentally
  - Check there is no electrical charge or load
- Wear personal protective equipment (PPE):
  - Insulating gloves DIN 60903 Class 0
  - Face shield IEC 61582-1-2
  - Safety glasses EN 166
  - Safety shoes with electrically insulating soles EN 20345

Use the Speed-TEC System – specially designed for low temperature curing

Save money and energy by choosing Speed-TEC System paints – because they dry fast even at low temperatures. All Spies Hecker basecoats, 2K topcoats and clears are EV compatible.

Speed-TEC System

- Permasolid® Speed-TEC HS Clear Coat 8810
- Permahyd® Hi-TEC Base Coat 480
- Permasolid® Speed-TEC Wet-on-Wet Surfacer 5550
- Permasolid® Speed-TEC Surfacer 5500
- Priomat® Reactive Pretreatment Wipes 4000

Spies Hecker – simply closer.