

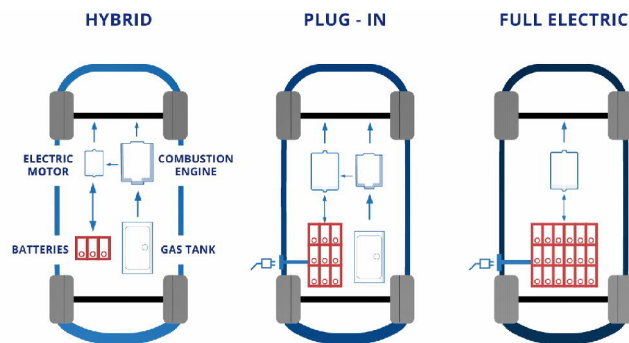
Electric / Hybrid Vehicles

FOR PROFESSIONAL USE ONLY

Description

The growth of electric and hybrid electric vehicles continues to increase in the automotive sector, which is also being driven by the introduction of government legislation. Vehicle manufacturers are transitioning away from internal combustion engines fuelled by diesel and petrol to meet the demands from legislation but also consumer demands. As repairers begin to see more of these type of vehicles being damaged and subsequently repaired, precautions have to be considered to execute an effective repair without causing damage to the electrical components.

YouTube Video Link: [Sikkens - Hybrid and Electric Vehicle Repairs](#)



Considerations

These guidelines are generic and detailed information on the make and model should be acquired from the relevant OEM to ensure safe repair at all times so as to prevent damage and or injury.

Risk assessment has to be conducted by the repairer to ensure all requirements are met for their equipment, environment and the type of vehicle being repaired to ensure a safe repair

Carry out pre and post diagnostics and note all error codes prior to carrying out any type of repair, reset and or make the vehicle owner aware of any relevant error codes that could cause an issue with the repair

Always check with the particular OEM and Model for repair methods – this is the ultimate guideline(s)

Some vehicle manufacturers may give advice to remove the main battery prior to any repair or drying cycle

Technicians should make all electric and high voltage systems safe to work before entering the bodyshop and or paintshop, consult relevant OEM for further information

Internal battery temperature should be lower than 30°C before entering the spraybooth and or drying cycle, consult relevant vehicle manufacturer for further information

Some vehicles require a minimum charge of 45% in the battery before drying to ensure the vehicle will run after drying, consult relevant vehicle manufacturer for further information

Some vehicles the battery charge is not applicable as it will charge once the engine has been started, consult relevant vehicle manufacturer for further information

Keys should be removed and ignition switched off to prevent any cooling systems for the battery systems being initiated during the repair or drying cycle

Recommendation on drying temperature is not to exceed 80°C for no longer than 60 minutes, some vehicle manufacturers state maximum 60°C or less and only allow a shorter exposure time, consult relevant vehicle manufacturer for further information

Infra red guidelines is 18kw for no longer than 18 minutes, always consult relevant vehicle manufacturer for further information


Always protect all high-voltage components from direct infra red radiation when IR drying.


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Products


Select the products from the below list that suit best your conditions and type of repair


Bodyfiller		
		Polykit IV
20°C	Dry to sand	15 – 20 minutes
IR drying Medium wave	Dry to sand	6 – 8 minutes (Low power)

		Autosurfacers UV
20°C	Dry to sand	5 minutes*
	Dry to handle	

* Requires continuous exposure with UV lamp – different types of lamp can reduce the overall drying time


Primer Fillers				
		Colorbuild Plus Hardener Sanding	Colorbuild Plus P25 Hardener	Multi Use Filler Excel P25 Hardener
20°C	Dry to sand	90 minutes	3 hours	3 hours
40°C	Dry to sand	45 minutes	90 minutes	90 minutes
60°C	Dry to sand	30 minutes	30 minutes	30 minutes
IR drying Medium wave	Dry to sand	(Low) + (High) power (5) + (12) minutes	(Low) + (High) power (5) + (12) minutes	(Low) + (High) power (6) + (10) minutes


Clearcoat					
		Autoclear LV Superior Fast Accelerator	Autoclear LV Superior Medium Accelerator	Autoclear LV Superior Fast	Autoclear LV Superior Medium
20°C	Dust dry	50 minutes	50 minutes	60 minutes	90 minutes
	Dry to handle	3 hours	3 hours	6 hours	7 hours
50°C	Dust dry	7 minutes	10 minutes	10 minutes	20 minutes
	Dry to handle	20 minutes	25 minutes	30 minutes	50 minutes
60°C	Dust dry	4 minutes	6 minutes	7 minutes	10 minutes
	Dry to handle	12 minutes	15 minutes	15 minutes	25 minutes
IR drying Medium wave	Dry to handle	(Low) + (High) power (4) + (8) minutes	(Low) + (High) power (4) + (8) minutes	(Low) + (High) power (4) + (8) minutes	(Low) + (High) power (4) + (8) minutes

Clearcoat			
		Autoclear Aerodry Fast Hardener	Autoclear Aerodry Standard Hardener
20°C	Dust dry	15 – 25 minutes	20 – 30 minutes
	Dry to handle	35 – 55 minutes	40 – 60 minutes
40°C	Dust dry	5 – 15 minutes	15 – 35 minutes
	Dry to handle	15 – 20 minutes	30 – 55 minutes
60°C	Dust dry	x	x
	Dry to handle	5 minutes	5 minutes
IR drying Medium wave	Dry to handle	(Low) + (High) power (2) + (6) minutes	(Low) + (High) power (2) + (6) minutes

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Clearcoat					
		Autoclear Plus HS P25 Hardener		Autoclear Xcel P25 Hardener	
		20°C	Dust dry	45 minutes	
	Dry to handle	6 hours		4.5 hours	
60°C	Dust dry	5 minutes		5 minutes	
	Dry to handle	35 minutes		30 minutes	
IR drying Medium wave	Dry to handle	(Low) + (High) power (4) + (8) minutes		(Low) + (High) power (4) + (8) minutes	

Topcoat					
		Autocryl LV Plus Accelerator	Autocryl LV Plus Thinner	Autocryl Plus P25 Hardener Plus Accelerator 2	Autocryl Plus P25 Hardener
		20°C	Dust dry	75 minutes	90 minutes
	Dry to handle	3.5 hours	5 hours	4 hours	10 hours
60°C	Dust dry	10 minutes	15 minutes	5 minutes	5 minutes
	Dry to handle	20 minutes	30 minutes	15 minutes	25 minutes
IR drying Medium wave	Dry to handle	(Low) + (High) power (4) + (8) minutes	(Low) + (High) power (4) + (8) minutes	(Low) + (High) power (4) + (8) minutes	(Low) + (High) power (4) + (8) minutes

* For "short wave" IR drying times refer to Infra Red Drying CR Products TDS.

Additional Information

Electric vehicle definitions:

BEV	Battery Electric Vehicle
EV	Electric Battery
HEV	Hybrid Electric Vehicle
PHEV	Plug-in Hybrid Electric Vehicle
MHEV	Mild Hybrid Electric Vehicle

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FOR PROFESSIONAL USE WITH SUITABLE HS&E EQUIPMENT

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advices given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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