

Sponges - Are they yesterday's Technology? – Part 2

Product & Paint Work Analysis – T H Detailing.

Hygan Products Limited - April 2023

Sponge Technology Case Study Part 2: - following the product material analysis by The University of Birmingham (**Part 1**), the next logical step was to uncover the performance of the products when used on a vehicle. For this, Hygan enlisted the help of T H Detailing, a professional IDA certified detailing company. Tom Humphries, the owner, agreed to design a program that would reveal not only whether sponges could be used safely on car paintwork, but whether they could compete with the most commonly used products on the market today.

Products Under Test: - Photographs of 5 products sent to the University for the microscopy analysis: (a) #1 (Hygan Ultimate Profile Sponge), (b) #2 (Standard Car Wash Sponge), (c) #3 (Microfibre Wash Mitt), (d) #4 (Stealth Wash Mitt – Blue noodle type), and (e) #5 (Ultra-Soft Lambswool Mitt).



#1 Hygan Ultimate Profile Sponge.



2 Standard Sponge.



#3 Microfibre Wash Mitt



#4 Stealth Wash Mitt – Blue noodle type



#5 Ultra-Soft Lambswool Mitt



Detailing & Valeting Professionals are asking - is a sponge safe for car paintwork, or is this yesterday's technology?

Hygan, who have been producing high quality technical sponge products for over 60 years are well placed to investigate as one of the leading manufacturers of high-end sponge products for the car care sector, so can their '**Ultimate Profile Sponge**' change the industry view on using sponges for car paintwork?

The Product Testing Plan Mercedes E400 Coupe.

1. **Mercedes Preparation Stage 1** – To create a smooth and defect free surface for final product performance appraisal.
 - a. **Pre- Wash** - snow foam which soaks into the dirt, removing loose particles by pulling them away from the surface, then rinse to free the paintwork of dirt and grime.



- b. **Contact Wash** – 2 bucket process to ensure cleaning products in contact with the paint surface are clean. This process relies on the products ability to pick up and retain any remaining dirt / debris away from the paint surface.
- c. **Chemical & Mechanical Decontamination** – consisting of an Iron fall out remover and a clay bar technique to prepare the paintwork.





- d. **Final Rinse & Dry** – professional twist pile drying towel.



- e. **Paintwork Inspection** – using the most up to date paint depth gauge and special LED lighting to ensure the paint depth is adequate for machine polishing and to identify areas of damage.



- f. **Pre-Polish Alcohol Cleaner** – ensures nothing remaining on the paintwork to be machine polished.
- g. **2 Stage Machine Polish / Ceramic Coating** – an initial cutting & polishing stage followed by the refining stage to add a gloss finish and ensure a perfect surface for analysing the performance of the products in stage 2. Furthermore, and on Tom's advice, the bonnet was ceramic coated to provide an additional surface for inspection, especially as ceramic coating is becoming an essential safeguard for many car owners.





YouTube Video Assessment Part 1 by Tom Humphries. -

<https://youtu.be/6YR4LY7GBT0>



2. Product Analysis & Assessment – Stage 2 – Following Stage 1 the preparation of the paint surface - The Mercedes was used for 6 weeks in rain, snow and after several hundred miles was ready to be valeted specifically using the products under test. Each product was used with the 2-bucket system on a specific part of the car bodywork, following which, each section was analysed for damage to establish which products had a detrimental effect on the highly polished paint surface.

a. 6 Week - Pre-Wash and Snow Foam.



b. 2-Bucket Clean with All Products.

1 Hygan Ultimate Profile Sponge.



The **Hygan Ultimate Profile Sponge** was used on a section of the car bodywork, following which Tom and Dylan examined the paintwork under special LED lighting and confirmed ***“that it held the dirt and grit away from the paintwork and no damage was evident”***.

#2 Standard Sponge.



The **Standard Sponge** was used on a section of the car body, following which Tom and Dylan examined the paintwork under special LED lighting and confirmed ***“that it did not have the ability to hold the grit and dirt away from the panel resulting in some swirling to the paint”***.

#3 Microfibre Wash Mitt.



The **Microfibre Wash Mitt** was used on a section of the car body, following which Tom and Dylan examined the paintwork under special LED lighting and confirmed that “***no damage was evident using the mitt, holding the dirt and grit away from the paintwork***”.

#4 Blue Noodle Wash Mitt.



The **Blue Noodle Mitt** was used on a section of the car body, following which Tom and Dylan examined the paintwork under special LED lighting and confirmed that “***no damage was evident using the mitt, holding the dirt and grit away from the paintwork, and was one of their preferred wash mitts***”.



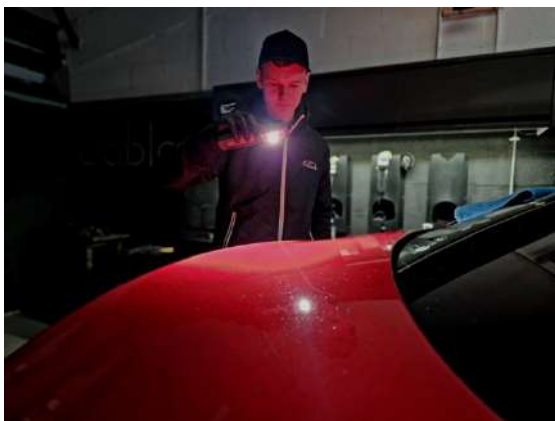
#5 Ultrasoft Lambswool Mitt.



The **Ultrasoft Lambswool Mitt** was used on a section of the car body, following which Tom and Dylan examined the paintwork under special LED lighting and confirmed that **“no damage was evident using the mitt, holding the dirt and grit away from the paintwork, however it was showing signs of moulting”**.

Inspection –

The final part of the program consisted of using each of the products on a different section of the car bodywork to establish whether any of the products damaged the paintwork post cleaning. To determine this, each section was fully scrutinised under special LED lighting as shown in the photograph below.





YouTube Video Assessment Part 2 by Tom Humphries. –

<https://www.youtube.com/watch?v=GIAxrw2pLGk>



Conclusion –

Whilst it is always challenging to carry out a definitive test, Hygan has genuinely set out to be as objective as possible by combining the University of Birmingham’s technical SEM material analysis with a real-world T H Detailing process and paintwork inspection program to go some way to demonstrating that its high-end sponge technology can perform alongside today’s most popular mitts.

So, can the latest super soft sponge technology when combined with a specially designed profile not only provide a real alternative to the mitts in this sector, but provide a cost effective long-lasting and safe car cleaning product. The answer we feel is a resounding YES, because **“not all sponges are created equally”**, if quality and functionality is important to you, then the Hygan sponge is a great addition to your car cleaning armoury – **why not give it a try and see for yourself.** www.hygancarcare.com

