Testing of Clear Automotive Coating

Materials Performance

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CSIRO

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Prepared on behalf of CSIRO and Authorised signatory

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1 Introduction

This report describes the testing of the coating for Chemical Resistance in accordance with ASTM D1308-20 'Effect of Household Chemicals on Clear and Pigmented Coating Systems'

2 Specimen Description

3 of 150x100mm Aluminium Q-Panels with an automotive "clear over base" paint system and polymer coating applied on top were provided by the client for Chemical Resistance.
Details of the polymer coating - 220501A of NXTZEN Ceramic Professional.

Specimens received 23/05/2022.

3 Test Methods

3.1 Chemical Resistance

The chemical resistance was determined in accordance with ASTM D1308-20 'Effect of Household Chemicals on Clear and Pigmented Coating Systems' – *Spot test, covered.*

Hydrochloric acid (32%), Phosphoric Acid (85%), Ethanol, 10:1 Water: Pancreatin slurry were used for testing upon client request. The reagents (1ml) were pipet onto horizontal panels and immediately covered with a watch glass for one hour. The surface was then wiped clean, washed with DI water, allowed to dry, and inspected for discoloration, change in gloss, blistering, softening, swelling, and cracking.

The testing was conducted under routine conditions; 23 ± 3°C and 60 ± 15% RH.

The testing was undertaken on 30 May 2022 and the results relate to the specimens as supplied.

4 Results

4.1 Chemical Resistance

ASTM D1308-20	**Results**
Hydrochloric acid (32%)	No effect
Phosphoric Acid (85%)	No effect
Ethanol	No effect
10:1; DI water: Pancreatin slurry	No effect

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