Chemical Resistance testing in accordance with ASTM D1308

Materials Performance

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Project Number: XC3963 [This is a private relabel report from CSIRO test report XC3943]
Date of issue: 13 December 2023
Status: Final

Client: Diamond Plate Australia Pty Ltd


CSIRO

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Report Details

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Report Status and Revision History

VERSION	STATUS	DATE	DISTRIBUTION	COMMENT
Revision A	Final	13 December 2023	CSIRO, Diamond Plate Australia Pty Ltd	

Prepared on behalf of CSIRO and Authorised signatory.

AUTHORISED SIGNATORY
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Contents

1 Introduction

The 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

Product trade name: Diamond Plate Graphene Ceramic Paint Protection
Batch number: MCG230921

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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%) B/N 375382, Phosphoric Acid (85%) B/N K1280, Ethanol B/N 1I276583-310, 10:1 Water: Pancreatin slurry Lot no SR05254; 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 by M. Arora and Z. Lu on 08 December 2023 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

Table 1: XC3963 test results

FINAL PAGE OF THE REPORT

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