

TÜV Rheinland Malaysia Sdn. Bhd.



Test Report

according to:

Customer Specific Requirement

(PENCIL HARDNESS)

for:

IGL Coatings Ecocoat Series

TÜV Rheinland Malaysia Sdn. Bhd.
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1. Applicant Details and Scope of Application

Applicant : **Ominent Sdn. Bhd.**
12, Jalan Saudagar Satu, U1/16A, Hicom Glenmarie Industrial Park, 40150, Shah Alam, Selangor Darul Ehsan, Malaysia.

Applicants Representative : **Mr Keong Chun Chieh**

Order Number : **Sign back quotation number 922007907 (Date: 08.06.2016)**

Confirmation Order Number : **117300524**

Locations of System evaluation : **TUV RHEINLAND MALAYSIA SDN. BHD.**
No.27, Jalan Para U8/103, Metropolitan Business Park, Seksyen U8, Bukit Jelutong, 40150 Shah Alam, Selangor, Malaysia.

Scope of Application : **PENCIL HARDNESS**

Test Sample : **IGL Coatings Ecocoat Series**

Test Sample Receiving Date : **10/06/2016**

Date of Inspection : **From 14/06/2016 To 28/06/2016**

Standards Applied : **Customer Specific Requirement (D3363-Pencil-Hardness) (Quotation number 922007907)**

Tester / Evaluator : **Nor Ilmi B Hj. Ibrahim**

Participants during testing : **Not Applicable**

Communication Language : **English**

Reported by:

Reviewed by:

28/06/2016
Date


NOR ILMI B HJ IBRAHIM
PROJECT ENGINEER
MOBILITY


MOHD SYAFIQ B HJ MOHD AYOB
ENGINEERING MANAGER
MOBILITY

2. Testing Description

| No. | Testing Scope | Testing Description |
|-----|-----------------------|---|
| 1 | D3363-Pencil Hardness | <ol style="list-style-type: none"> 1. Test method is according to Customer Specific Requirement. 2. Test requirement is according to Customer Specific Requirement. |

3. Testing Objectives, Basis and Scope of Assessment

| No. | Testing Scope | Testing Objective, Basis and Scope of Assessment |
|-----|-----------------------|---|
| 1 | D3363-Pencil Hardness | <ol style="list-style-type: none"> 1. To test the hardness of the coating via pencil hardness from 9B to 10H 2. This test method covers a procedure for rapid, inexpensive determination of the film hardness of an organic coating on a substrate in terms of drawing leads or pencil leads of known hardness. |

4. Testing Procedure

| No. | Testing Scope | Testing Procedure |
|-----|-----------------------|---|
| 1 | D3363-Pencil Hardness | <ol style="list-style-type: none"> 1. A coated panel is placed on a firm horizontal surface. The pencil is held firmly against the film at a 45° angle and pushed away from the operator with a load of 750gm. 2. The process is started with the hardest pencil to the softest 10H-9H-8H-7H-6H-5H-4H-3H-2H-H-F-HB-B-2B-3B-4B-5B-6B-7B-8B-9B <p>Temperature : 23 (+/- 2°C) Relative Humidity : 50 (+/- 5% RH)</p> |

5. Testing Evaluations

| No. | Testing Scope | Testing Evaluation |
|-----|-----------------------|---|
| 1 | D3363-Pencil Hardness | 1. According to the specified scope and analytical techniques the hardness of the coating of the submitted sample are as per the results. |

6. Testing Summary

| No. | Testing Scope | Result |
|-----|-----------------------|----------|
| 1 | D3363-Pencil Hardness | Reported |

7. Statement of Conformity

This report is CONFIDENTIAL and is the customer property as mention above. TUV Rheinland Malaysia Sdn. Bhd. shall not be responsible for any distribution copies of this report or any implications arise from such distribution.

The results of analysis performed by TUV Rheinland Malaysia Sdn. Bhd. apply to the particular samples at the time of its analysis. They do not indicate or imply that TUV Rheinland Malaysia Sdn. Bhd. approves, recommended or endorses the manufacturers or suppliers or users of products and it shall not be used to imply product certification.

TUV Rheinland Malaysia is listed in the group certification of TÜV Rheinland Kraftfahrt GmbH as competent according to DIN EN ISO / IEC 17025. DAR-Registration-No.: KBA-P00010-96.



8. Appendix: Photographic Documentation

APPENDIX 1: TEST SAMPLE



Photo 1: Test sample - IGL Coatings Ecocoat Series



Photo 2: Test sample plate

APPENDIX 2 : TEST RESULTS

| SAMPLE | EVALUATION | JUDGEMENT |
|------------|------------|-----------|
| KENZO BASE | ABOVE 10H | REPORTED |
| QUARTZ | ABOVE 9H | REPORTED |
| POLY | ABOVE 8H | REPORTED |
| TRIM | ABOVE 6H | REPORTED |
| WHEEL | ABOVE 9H | REPORTED |
| HEADLIGHT | ABOVE 6H | REPORTED |



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9. List of Test Measurement / Equipment

| No. | Test Measurement / Equipment | Serial / Inventory Number | Next Calibration |
|-----|------------------------------|---------------------------|------------------|
| 1 | BYK 5800 | 450 | - |



--- End of Report ---