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# LABORATORY REPORT

**Kadisco Paint & Adhesive Industry S.C**
**Dubai, UAE**

**Report No: WD-R-231021-0722**
**Sample No: WD-S-231021-0705**
**Date of Report: 11/11/2023**

**Introduction:** Further to the request received from **M/s. Kadisco Paint & Adhesive Industry S.C** dated 23rd September 2023; the sample of Paint was tested for below parameters.

**Sample Type** : Paint
**Request No** : WD-Q-231021-0131
**Sample Received Date** : 23/10/2023.
**Date Tested** : 23/10/2023-11/11/2023.
**Tested By** : MR

**General Information**
Name of the Product : Royal Matt

**Result of Analysis**

| Test | Method | Unit | Result |
|---|---|---|---|
| VOC | USEPA 24 | g/L | <1 |
| Alkylphenol ethoxylates (APEOs) | ASTM D4252-89 | ppm | <1 |

**Remarks:** None
**Signed for and on behalf of Wimpey Laboratories LLC**

**Arya Rajeev**
**Chemist**
Test results relate only to the samples tested.
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# TEST REPORT ON SCRUB RESISTANCE

| | | | |
|---|---|---|---|
| Customer Name | Kadisco Paint and Adhesive Industry S.C<br>P.O Box: 120919<br>Ethiopia | | |
| Sample Description | Royale Primer +<br>Royale Matt Emulsion | Lab Report No. | WD-R-231023-0644/1 |
| Source | N.G | Lab Request No. | WD-Q-231023-0163 |
| Test Method | DIN 53778 | Sample No. | WD-S-231023-0613/1 |
| Test Temperature | 23°C & 50% RH | Date Received | 23/10/2023 |
| Tested Location | Wimpey–Dubai | Casting Date | 28/10/2023 |
| Wimpey Ref No. | 23102331 | Date Tested | 04/11/2023 |
| Tested By | SU | Date Reported | 14/11/2023 |

## Test Results

| Test | Result |
|---|---|
| Scrub Resistance | 20000 Cycles |

**Remarks:** None.

**Signed for and on behalf of Wimpey Laboratories L.L.C.**

**S.Sarath Kumar**
**Head of Department**

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# TEST REPORT ON VOLUME SOLIDS

| | | | |
|---|---|---|---|
| Client | Kadisco Paint and Adhesive Industry S.C<br>P.O Box: 120919<br>Ethiopia | | |
| Project Name | N.G | Lab Report No. | WD-R-231023-0644/2 |
| Sample Description | Royale Primer +<br>Royale Matt Emulsion | Lab Request No. | WD-Q-231023-0163 |
| Source | N.G | Sample No. | WD-S-231023-0613/1 |
| Client's Ref. | N.G | Date Received | 23/10/2023 |
| Test Method | ASTM D2697-03(2021) | Date Tested | 28/10/2023 |
| Receptacle Used | Metal Disc | Date Reported | 14/11/2023 |
| Immersion Liquid Used | Distilled Water | Cast Date | 28/10/2023 |
| Type of Air oven used | Hot Air oven | Room Temperature | 23°C |
| Method of Coating Receptacle | By Dipping | Relative Humidity | 50% |
| Drying Type | 1 hour flash dry at 105°C | Sample brought in by | Client |
| Wimpey Lab Ref No. | 23102331 | Tested By | PK |

## Test Results

| Specimen Number | Unit | Result |
|---|---|---|
| 1 | % | 39.6 |
| 2 | | 41.2 |
| Average | | 40.4 |

**Remarks:** None.

**Signed for and on behalf of Wimpey Laboratories L.L.C.**

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**S.Sarath Kumar**
**Head of Department**

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# TEST REPORT ON PULL-OFF ADHESION STRENGTH

| | | | |
|---|---|---|---|
| Customer Name | Kadisco Paint and Adhesive Industry S.C<br>P.O Box: 120919<br>Ethiopia | | |
| Project Name | N.G | Lab Report No. | WD-R-231023-0644/3 |
| Sample Description | Royale Primer +<br>Royale Matt Emulsion | Lab Request No. | WD-Q-231023-0163 |
| Source | Kadisco Paint and Adhesive Industry S.C | Sample No. | WD-S-231023-0613/1 |
| Test Method | ASTM D4541-22 | Wimpey Ref No. | 23102331 |
| Machine Details | Manufacturer: Elcometer<br>Model: 510-50T<br>Serial Number: WA 22213 | Date Received | 23/10/2023 |
| Location | In-House | Date Tested | 04/11/2023 |
| Test Temperature& Relative Humidity | 23°C & 50% | Date Reported | 14/11/2023 |
| Substrate Used | Concrete | Cast Date | 28/10/2023 |
| Adhesive Used | Two Component Epoxy | Curing Condition | 7 days at 23°C |
| Tested By | SU | | |

## Test Procedure

The general pull-off test is performed by securing a loading fixture (dolly, stud) normal (perpendicular) to the surface of the coating with an adhesive. After the adhesive is cured, a testing apparatus is attached to the loading fixture and aligned to apply tension normal to the test surface. The force applied to the loading fixture is then gradually increased and monitored until either a plug of material is detached, or a specified value is reached, When a plug of material is detached the exposed surface represents the plane of limiting strength within the system.
The nature of the failure is qualified in accordance with the percent of adhesive and cohesive failures, and the actual interfaces and layers involved.
The pull-off strength is computed based on the maximum indicated load

| Description | RESULTS | | |
|---|---|---|---|
| Test Number | 1 | 2 | 3 |
| Test Position | Vertical | Vertical | Vertical |
| Size of Dolly (mm) | 20 | 20 | 20 |
| Max. Load Applied (N) | 923.2 | 672.0 | 797.6 |
| Pull off Strength (N/mm$^2$) | 2.94 | 2.14 | 2.54 |
| Average Pull off Strength (N/mm$^2$) | 2.54 | | |
| Mode of Failure | 100% Failure observed from Concrete | | |

**Remarks:** None

**Signed for and on behalf of Wimpey Laboratories LLC**

**S.Sarath Kumar**
**Head of Department**

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# LABORATORY REPORT

**Kadisco Paint & Adhesive Industry S.C.**
**Dubai, UAE**

**Report No: WD-R-231021-0728**
**Sample No: WD-S-231021-0713**
**Report Date: 29/11/2023**

**Introduction:** As per the request received from **M/s. Kadisco Paint & Adhesive Industry S.C** on 21st October 2023, the sample of Paint was tested. Given below are the results obtained.

| | |
|---|---|
| **Sample Type** | : Paint |
| **Request Number** | : WD-Q-231021-0134 |
| **Sample Received Date** | : 21/10/2023. |
| **Date Tested** | : 22/10/2023-29/11/2023. |
| **Tested By** | : MR |

**General Information**

Sample Description : Royale Primer & Royal Matt

**Chemical Resistance**

Test method : ASTM D 1308
Test temperature : 23±2°C
Test humidity : 55±5%
Test duration : 24 hours

| Test | Observation | Result |
|---|---|---|
| Green staining agent ($Cr_2O_3$) | No discoloration, change in gloss, blistering, swelling, softening, loss of adhesion or any special phenomenon | Resistant |
| Red staining agent ($Fe_2O_3$) | | Resistant |
| Iodine solution | | Resistant |
| Olive oil | | Resistant |

**Remarks:** None

**Signed for and on behalf of Wimpey Laboratories LLC**

**Arya Rajeev**
**Chemist**

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Form # WLRF 90 Issue No.1 Issued on : 29/05/2019

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# TEST REPORT ON TENSILE STRENGTH & ELONGATION

| | | | |
|---|---|---|---|
| Client | Kadisco Paint and Adhesive Industry S.C<br>P.O Box: 120919<br>Ethiopia | | |
| Sample Description | Royale Primer +<br>Royale Matt Emulsion | Lab Report No. | WD-R-231023-0644/4 |
| Source | N.G | Lab Request No. | WD-Q-231023-0163 |
| Curing and test condition | Temperature: 23°C<br>Relative Humidity: 50% | Sample No. | WD-S-231023-0613/1 |
| Sampling Method | ASTM D412-16(2021) | Date Received | 23/10/2023 |
| Test Method | ASTM D412-16(2021) | Date Tested | 04/11/2023 |
| Specimen Type | Test Method A – Die C | Date Reported | 14/11/2023 |
| Rate of Speed | 500 mm/minute | Cast Date | 28/10/2023 |
| Wimpey Ref No. | 23102331 | Curing Condition | 7 days at 23ºC |
| Tested By | PK | | |

**Test Results**

| Specimen Number | Width (mm) | Thickness (mm) | Maximum Force (N) | Tensile Strength (N/mm²) | Elongation % |
|---|---|---|---|---|---|
| 1 | 25.0 | 0.17 | 16.5 | 3.88 | 158 |
| 2 | 25.0 | 0.15 | 12.6 | 3.36 | 155 |
| 3 | 25.0 | 0.19 | 19.5 | 4.11 | 154 |
| 4 | 25.0 | 0.18 | 16.0 | 3.56 | 161 |
| 5 | 25.0 | 0.17 | 15.3 | 3.59 | 157 |
| | | | **Average** | 3.70 | 157 |

**Remarks:** None

**Signed for and on behalf of Wimpey Laboratories L.L.C.**

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**S.Sarath Kumar**
**Head of Department**

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# TEST REPORT

**Kadisco Paint & Adhesive Industry S.C.**
**Al,Quoz,Dubai**
**UAE**

**Report No: WD-R-231021-0723**
**Sample No: WD-S-231021-0706**
**Report Date: 23/11/2023**

**Sample Description** : Royale Matt Emulsion
**Batch Number** : N/A
**Manufacture date** : N/A
**Sample Received** : 21/10/2023.
**Test Date** : 21/10/2023 to 23/11/2023.
**Test Conducted By** : DI

## 1.0 Introduction:

Further to the requisition received from **M/s Kadisco Paint & Adhesive Industry S.C.** dated **21st October 2023**, the sample was tested for Antifungal study.

## 2.0 Test method reference:

ASTM G21; Standard Practice for the determining Resistance of Synthetic Polymeric Materials to Fungi.

## 3.0 Methodology:

The test method involves the following.

1. Selection of suitable specimens for determinations of pertinent properties.
2. Inoculation of the specimens with suitable organisms.
3. Exposure of the inoculated specimens under conditions favorable to growth.
4. Examination and rating for visual growth.

The prepared sample and the controls of the same substrate were placed on to nutrient agar with sufficient nutrient salts. The spores of the inoculum were sprayed with the help of sterilized atomizer so that the entire surface is moistened with the spore suspension.

The plates were incubated at 28°C to 30°C and not less than 85% relative humidity for 26-28 days.

The results were reported by rating the growth for a period of 4-weeks. Traces of growth was estimated on "0 to 4" rating scale, in such a way that the value of "4" is taken as heavy growth and a value of "0" as no growth.

| Observed colonies on test specimens | Rating |
|---|---|
| None (sterile) | 0 |
| Trace of growth (less than 10%) | 1 |
| Light growth (10 to 30% colonies) | 2 |
| Medium growth (30 to 60%) | 3 |
| Heavy growth(60% to complete coverage) | 4 |

Fungl cultures used to prepare the test cultutre are *Aspergillus niger*, *Penicillium pinophilum*,*Chaetomium globosum*,*Gliocladium virens* and *Aureobasidium pullulans*.



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**Report No: WD-R-231021-0723**

## 4.0 Test Results

| Test Duration | Observation/Result | Rating |
|---|---|---|
| Week # 1 | No Growth (None) | 0 |
| Week # 2 | No Growth (None) | 0 |
| Week # 3 | No Growth (None) | 0 |
| Week # 4 | No Growth (None) | 0 |
| **Final Rating as per ASTM** | **0** | |

## 5.0 Conclusion

Final rating scale of **0** as per ASTM G21, indicates that analyzed sample have a good resistance to Mold growth under the controlled test conditions.

**Signed for and on behalf of Wimpey Laboratories**

**Shamna Salamuddin**
**Head of Microbiology Department**

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