

PHYSICAL TESTING REPORT

Lucideon Reference: (184854)

Client: Dural UK Ltd
Unit 6a
Wakefield Business Centre
Denby Dale Road
Wakefield
WF2 7AZ

For the Attention of: Ms. Elle David

Date Logged: 13-Aug-2018

Date of Tests: 28-Jan-2019 to 15-Feb-2019

Report Date: 15-Feb-2019

Purchase Order No.: BACS

Work Location: Lucideon UK

Please find attached the results for the samples recently submitted for analysis.



Mr Simon Hall
Manager



Description	Customer Reference	Lucideon Sample No
Orange	-	(184854)-1082
Matt Black	-	(184854)-1083
Light Grey	-	(184854)-1084
Tex Grey	-	(184854)-1085
Tex Black	-	(184854)-1086



WEAR TESTING ON DOOR STRIPS

1 SAMPLES

The samples consisted of an inservice product and new products marked as follows:-

- Orange
- Matt Black
- Light Grey
- Tex Grey
- Tex Black(Glossy)

2 INTRODUCTION

Dural UK Ltd would like to be able to give a guarantee that their products are durable, in terms of the wear capabilities, over a period of time. In order to be able to assess the wear capabilities a method was developed that simulated the type of wear seen on a used product that had been in service for ten years. First signs of wear started at approximately seven years. A scrubbing technic was used using an abrasion machine used to assess the wear on bath surfaces (Figure 1, Appendix A). Scrubbers with different types of abrasive heads were used to develop a test that could accelerate the wear to produce the same amount seen on the used product in a relatively short time. After a number of trials a head consisting of brass bristles was used. The effect can be seen in Figure 2 in Appendix A. It should be noted that every type of wear seen in service may not be accounted for, in particular impacts from heavy objects or things dropped from above.

3 PROCEDURE

The test was carried out by allowing the scrubber to contact the surface of each sample with minimum load. The scrubber completed one cycle once the head had moved forward and backwards across the sample. One cycle being equivalent to two passes of the head.

Using the in service product the test was carried out under observation to determine when wear first started to occur. First signs of wear appeared after six hundred cycles and can be seen in Figure 3, Appendix A. Wear equivalent to the wear on the in service product appeared after two thousand two hundred cycles and can be seen in Figure 2, Appendix A.

This set the bench mark i.e. six hundred cycles was approximately equal to seven years service, two thousand two hundred cycles was approximately equal to ten years service.

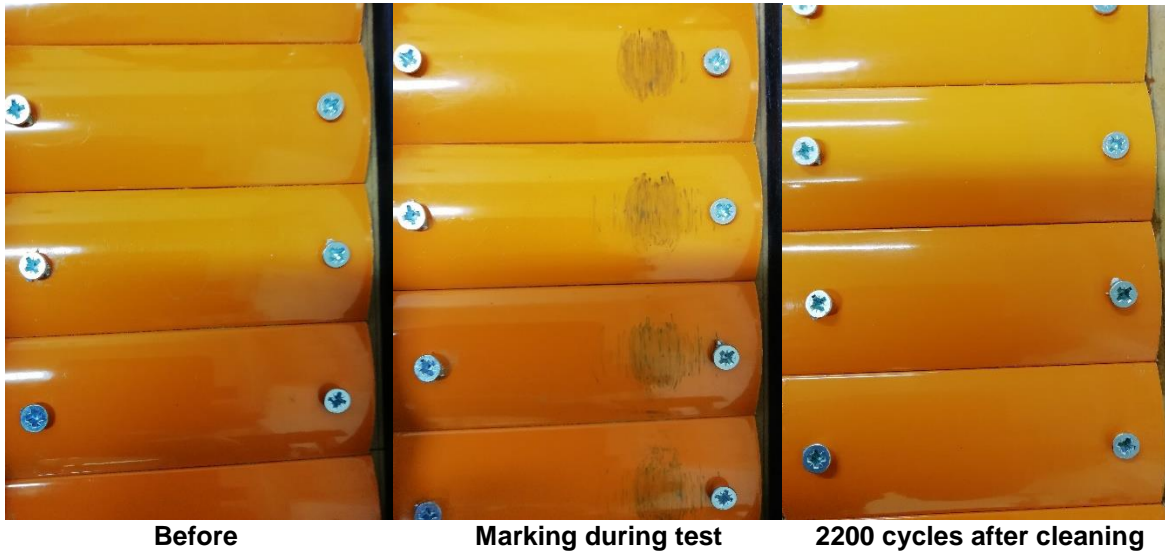
The test was repeated on each of the new products, stopping after two thousand two hundred cycles.

4 RESULTS/OBSERVATIONS

Heavy marking was obseved throughout the test on each sample and can be seen in the results below. However, this marking was easily removed using a damp cloth and a typical surface cleaner, leaving no permanent marks to each surface with the exception of one.

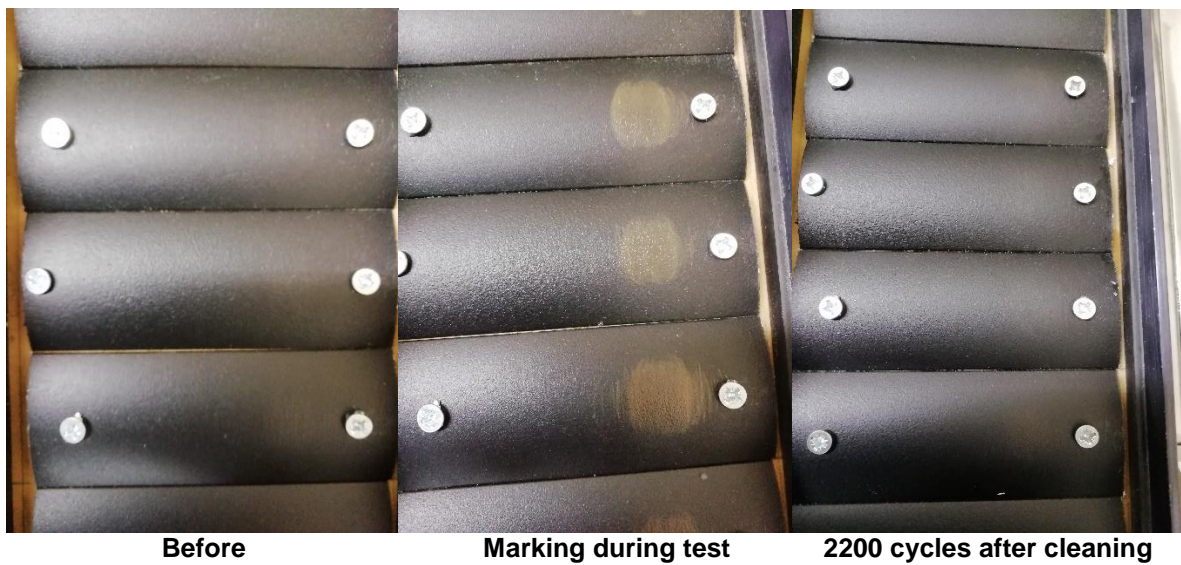
Results are as follows:-

4.1 Orange



The sample marked Orange showed no signs of marking after 2200 cycles and would therefore have an approximate life span greater than 10 years.

4.2 Matt Black



The sample marked Matt Black showed no signs of marking after 2200 cycles and would therefore have an approximate life span greater than 10 years.

4.3 Light Grey



Before

Marking during test

2200 cycles after cleaning

The sample marked Light Grey showed no signs of marking after 2200 cycles and would therefore have an approximate life span greater than 10 years.

4.4 Tex Grey



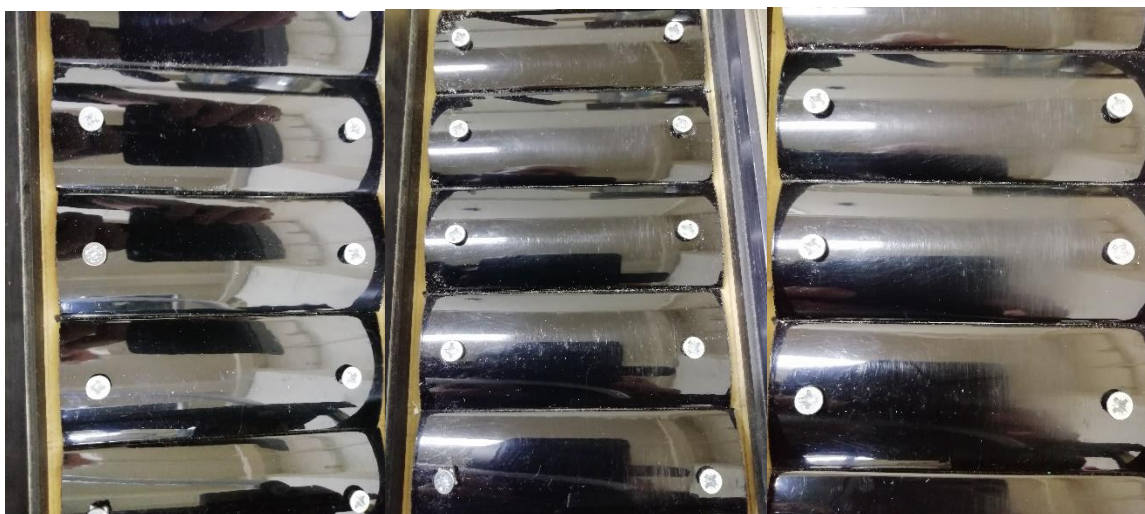
Before

Marking during test

2200 cycles after cleaning

The sample marked Tex Grey showed no signs of marking after 2200 cycles and would therefore have an approximate life span greater than 10 years.

4.5 Tex Black



Before

Marking during test

2200 cycles after cleaning

The sample marked Tex Black(glossy) showed some signs of marking after 2200 cycles. Because of the gloss effect of the surface the markings can be seen in certain light conditions and at certain angles and would therefore have an approximate life span equal to 10 years.

APPENDIX A



Figure 1



Figure 2

Figure 3

END OF TEST REPORT