



TSR 18-T579F

Salt spray testing

for Corrosion Control Ltd, 48 Riverside Drive
Whangarei 0140

BACKGROUND:

| | | |
|----------------|--|--|
| Requestor | Thomas Mueller Corrosion Control Ltd. 48 Riverside Drive Whangarei 0140 New Zealand. | Phone: +64 (0)9 438 88 00 |
| Test Venue | Dulux Powder & Industrial Coating NZ Ltd Technical & Innovation Laboratory 31B Hillside Road Glenfield Auckland 0627 New Zealand www.duluxpowdercoatings.co.nz | Ph +64 9 441 8244 Fax: +64 9 441 8242 |
| Test Period | 27.8.18 to 4.9.18 | |
| Date of report | 12.9.18 | |
| Report by | Prasanna Shenoy Technical Services Chemist Dulux Powder and Industrial Coatings Ltd | |

TEST OBJECTIVES:

The following Q-Lab panels coated with various anti corrosion lubes labelled as below were provided for testing as per ASTM B-117 until failure.

1. Panel 1: Rock'n Roll bicycle chain lube.
2. Panel 2: Finish line bicycle chain lube.
3. Panel 3: Muc-Off wet lube.
4. Panel 4: Squirt Long lasting Dry lube, bicycle chain lube.
5. Panel 6: SpeedX
6. Panel 7: ReelX.
7. Panel 8: Muc Off Hydro Dynamic bicycle chain lube.
8. Panel 11: CorrosionX XD.

TEST METHOD:

1. The initial photos of the samples are taken before commencing the test.
2. The samples are placed in Neutral salt spray cabinet making sure samples are not touching each other.
3. The samples are inspected periodically and photos taken to capture the onset of corrosion.
4. Corrosion **>3%** of the area is deemed **FAIL** as per AS 2331.3.1—2001 (Reconfirmed) 2017-04-07. (A rating of 8 with corrosion under 3% area is deemed PASS)

Rating of Unscribed Areas

| Area Failed (%) | Rating Number |
|-----------------|---------------|
| No failure | 10 |
| 0 - 1 | 9 |
| 2 - 3 | 8 |
| 4 - 6 | 7 |
| 7 - 10 | 6 |
| 11 - 20 | 5 |
| 21 - 30 | 4 |
| 31 - 40 | 3 |
| 41 - 55 | 2 |
| 56 - 75 | 1 |
| > 75 | 0 |

Minimum blister rating of 8 within the test specimen field, in accordance with the above tables.

5. Report.

TESTING:

Photo1: Panels after Corrosion testing rated from best to worst.

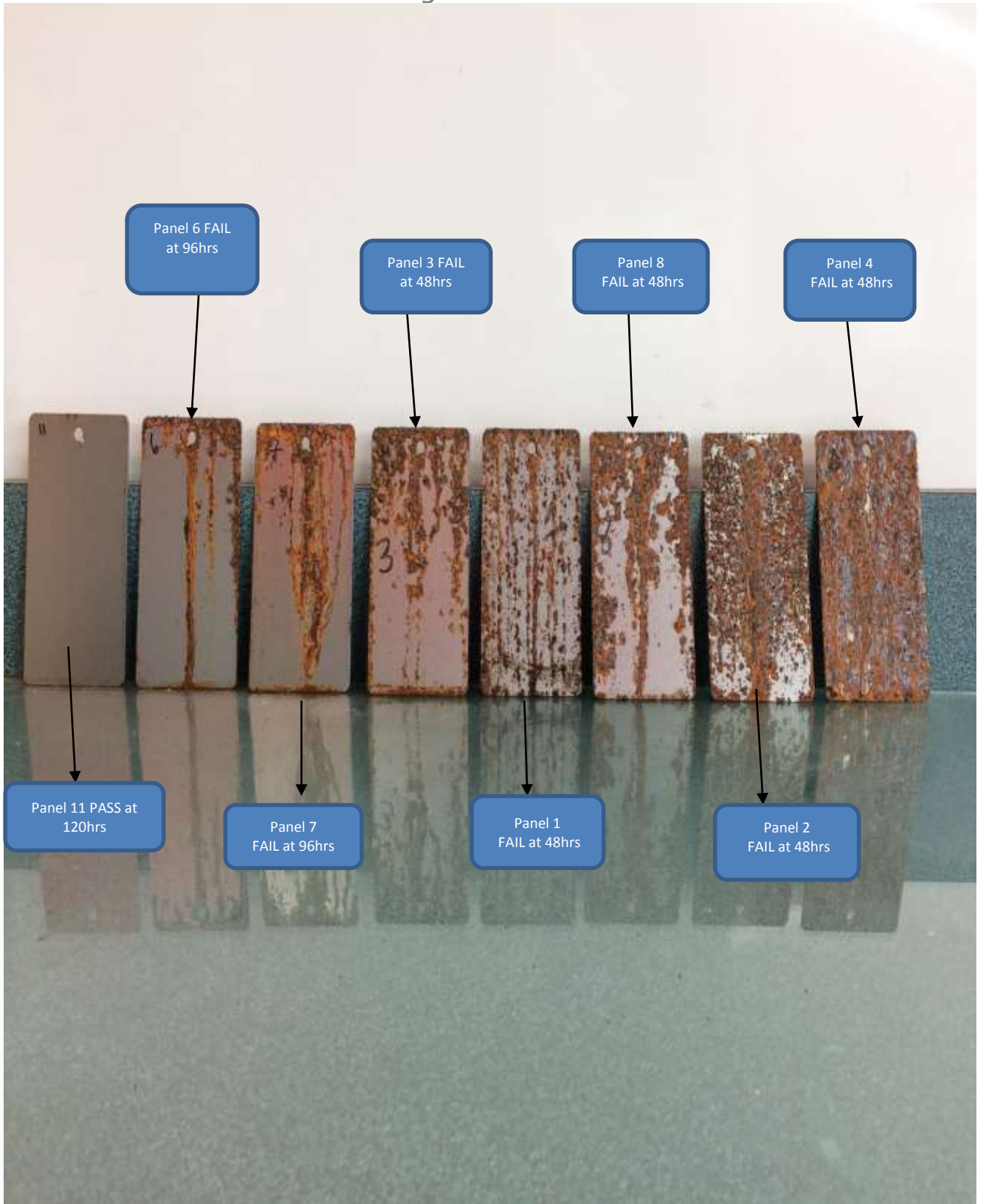


Photo 2: Panels 11,6,7 &3 after completion of test.



Photo 3: Panels 1,8,2 &4 after completion of test.



Findings:

The performance of the various anti corrosion lubes tested can be rated as below:

1. CorrosionX XD (Pass at 120hrs very minor corrosion spot as per Photo2).
2. Speed X (Fail at 96hrs).
3. Reel X (Fail at 96hrs).
4. Muc-Off wet lube (Fail at 48 hrs).
5. Rock'n Roll bicycle chain lube (Fail at 48 hrs).
6. Muc Off Hydro Dynamic bicycle chain lube (Fail at 48 hrs).
7. Finish line bicycle chain lube (Fail at 48 hrs).
8. Squirt Long lasting Dry lube, bicycle chain lube (Fail at 48 hrs).

Conclusions:

CorrosionX XD (panel 11) has performed the best in terms of corrosion with least corrosion.

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