

**Ir. Ron Verlouw
VESCOB BV
Postbus 70
NL-5753 AV DEURNE
NEDERLAND**

your delivery of
2010-04-15

your reference
SO-1056966

our reference
PVH/3929

date
Zwijnaarde, 2010-04-26

Analysis Report 74046/B

Required tests :

**IMO Fire Test Procedures Code, Annex 1 part 7 (1998)
Resolution A.471 (XII) / Resolution A.563(14)
Test for vertically supported textiles and films**

| Identification number | Information given by the client | Date of receipt |
|-----------------------|---------------------------------|-----------------|
| T004527 | TAVIRA | 2010-04-15 |

Pros Van Hoeyland
order responsible

For further information, please contact our sectorial adviser Pros Van Hoeyland

This report runs to 3 pages and may be reproduced, as long as it is presented in its entire form, without written permission of Centexbel. The results of the analysis cover the received samples. Centexbel is not responsible for the representativeness of the samples.

| | | |
|---------------|------------|-------|
| our reference | date | page |
| PVH/3929 | 2010-04-26 | 2 / 3 |

Reference : T004527 - TAVIRA

IMO Fire Test Procedures Code, Annex 1 part 7 (1998)
Resolution A.471 (XII) / Resolution A.563(14)
Test for vertically supported textiles and films

End of tests: 23 April 2010

| | | |
|----------------|------------------------|----------------------|
| test specimens | orientation | : vertical |
| | dimensions | : 220 mm x 170 mm |
| burner | gas | : commercial propane |
| | flame - vertical reach | : 40 mm |
| | flame application time | : 5 s - 15 s |

The test specimens have not been cleaned nor submitted to an accelerated ageing procedure.

Conditioning of the test specimens
 At least 24 hours at $(20 \pm 5)^{\circ}\text{C}$ and $(65 \pm 5)\%$ RH

determination of the worst testing condition: surface or edge ignition

length

| | surface face | | surface back | | edge | |
|-----------------------------|--------------|----|--------------|----|------|----|
| | 1 | 2 | 1 | 2 | 1 | 2 |
| flame application time (s) | 5 | 15 | 5 | 15 | 5 | 15 |
| afterflame time (s) | 0 | 0 | 0 | 0 | 2 | 0 |
| afterglow time (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| surface flash | no | no | no | no | no | no |
| edge reached | no | no | no | no | no | no |
| ignition cotton wool | no | no | no | no | no | no |
| maximum damaged length (mm) | 37 | 42 | 35 | 51 | 35 | 75 |

no sustained ignition → testing continued under conditions showing the greatest damaged length = edge ignition 15 s

width

| | surface face | | surface back | | edge | |
|-----------------------------|--------------|----|--------------|----|------|----|
| | 1 | 2 | 1 | 2 | 1 | 2 |
| flame application time (s) | 5 | 15 | 5 | 15 | 5 | 15 |
| afterflame time (s) | 0 | 0 | 0 | 0 | 0 | 9 |
| afterglow time (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| surface flash | no | no | no | no | no | no |
| edge reached | no | no | no | no | no | no |
| ignition cotton wool | no | no | no | no | no | no |
| maximum damaged length (mm) | 37 | 50 | 39 | 46 | 40 | 70 |

Reference : T004527 - TAVIRA

worst testing conditions

length - edge - flame application time 15 s

| | length | | | | |
|-----------------------------|--------|----|----|----|----|
| | 1 | 2 | 3 | 4 | 5 |
| flame application time (s) | 15 | 15 | 15 | 15 | 15 |
| afterflame time (s) | 0 | 0 | 0 | 0 | 2 |
| afterglow time (s) | 0 | 0 | 0 | 0 | 0 |
| surface flash | no | no | no | no | no |
| edge reached | no | no | no | no | no |
| ignition cotton wool | no | no | no | no | no |
| maximum damaged length (mm) | 75 | 62 | 58 | 57 | 72 |

width - edge - flame application time 15 s

| | width | | | | |
|-----------------------------|-------|----|----|----|----|
| | 1 | 2 | 3 | 4 | 5 |
| flame application time (s) | 15 | 15 | 15 | 15 | 15 |
| afterflame time (s) | 9 | 0 | 0 | 0 | 0 |
| afterglow time (s) | 0 | 0 | 0 | 0 | 0 |
| surface flash | no | no | no | no | no |
| edge reached | no | no | no | no | no |
| ignition cotton wool | no | no | no | no | no |
| maximum damaged length (mm) | 70 | 48 | 58 | 70 | 72 |

Proposed criteria for curtains and drapes (Resolution A.563(14) - Appendix 3)

1. Afterflame time ≤ 5 s for any specimen tested with face ignition.
2. No flame propagation to the edges for any specimen tested with face ignition.
3. No ignition of the cotton wool for any specimen
4. Average char length ≤ 150 mm in any of the batches tested with face or edge ignition.
5. No occurrence of a surface flash more than 100 mm from the point of ignition

The fabric passes the proposed criteria for curtains and drapes.