TEST REPORT

Client: BASF New Zealand Limited
Level 4
4 Leonard Isitt Drive
Auckland Airport Auckland 2022 New Zealand

clients ref.: "styropor f295E"
Rigid Foam
Colour: White
End Use: Insulation
Nominal Composition: Polystyrene
Nominal Mass per Unit Area/Density: Approximate Density: 20.3kg/m³
Nominal Thickness: 50mm

AS/NZS 1530.3-1999
Methods for Fire Tests on Building Materials, Components and Structures Part 3:
Simultaneous Determination of Ignitability, Flame Propagation, Heat Release and Smoke
Release

Face tested:
Date tested: 14/10/2014

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Standard Error</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignition time</td>
<td>0.25</td>
<td>9.74</td>
</tr>
<tr>
<td>Flame propagation time</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>Heat release integral</td>
<td>2.4</td>
<td>40.3</td>
</tr>
<tr>
<td>Smoke release, log d</td>
<td>0.0716</td>
<td>-1.2663</td>
</tr>
<tr>
<td>Optical density, d</td>
<td>0.0581 / metre</td>
<td></td>
</tr>
</tbody>
</table>

Number of specimens ignited: 6
Number of specimens tested: 6

Regulatory Indices:
Ignitability Index: 10 Range 6-20
Spread of Flame Index: 0 Range 6-10
Heat Evolved Index: 1 Range 6-10
Smoke Developed Index: 3 Range 6-10
TEST REPORT

Client: BASF New Zealand Limited
Level 4
4 Leonard Isitt Drive
Auckland Airport Auckland 2022 New Zealand

Test Number: 14-000725
Issue Date: 23/10/2014
Print Date: 23/10/2014

Each test specimen had an unattached backing of 4.5mm thick fibre reinforced cement board.

Each test specimen was restrained on the exposed face by a layer of galvanised welded square mesh made from wire of nominal diameter 0.8mm and nominal spacing 12mm in both directions and the assembly clamped in four places.

The specimens melted and flowed away from the area of maximum heat during the test. Due to this phenomena it should be recognised that this test result may not be a true indication of the product’s fire hazard properties.

These results only apply to the specimen mounted, as described in this report. The result of this fire test may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions.

Specimens tended to flash before ignition. Ignition was based on the occurrence of a single flash of flame which lasted longer than 10 seconds.
## TEST REPORT

**Client:** BASF New Zealand Limited  
**Level 4**  
**4 Leonard Isitt Drive**  
**Auckland Airport Auckland 2022 New Zealand**

**Test Number:** 14-00072G  
**Issue Date:** 23/10/2014  
**Print Date:** 23/10/2014

### Sample Description

- **Clients Ref:** "Styropor F395"  
- **Rigid foam**  
- **Colour:** White  
- **End Use:** Insulation  
- **Nominal Composition:** Polystyrene  
- **Nominal Mass per Unit Area/Density:** Approximate Density: 23.3kg/m³  
- **Nominal Thickness:** 50mm

### AS/NZS 1530.3-1999

Methods for Fire Tests on Building Materials, Components and Structures  
**Part 3:** Simultaneous Determination of Ignitability, Flame Propagation, Heat Release and Smoke Release

- **Face tested:**  
- **Date tested:** 14/10/2014

<table>
<thead>
<tr>
<th>Test Parameter</th>
<th>Standard Error</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignition time</td>
<td>0.26</td>
<td>10.38 min</td>
</tr>
<tr>
<td>Flame propagation time</td>
<td>Nil</td>
<td>Nil sec</td>
</tr>
<tr>
<td>Heat release integral</td>
<td>2.3</td>
<td>42.6 KJ/m²</td>
</tr>
<tr>
<td>Smoke release, log d</td>
<td>0.0331</td>
<td>-1.0486</td>
</tr>
<tr>
<td>Optical density, d</td>
<td></td>
<td>0.0905 / metre</td>
</tr>
</tbody>
</table>

- **Number of specimens tested:** 6

**Regulatory Indices:**  
- **Ignitability Index:** 10 Range 0-20  
- **Spread of Flame Index:** 0 Range 0-10  
- **Heat Evolved Index:** 1 Range 0-10  
- **Smoke Developed Index:** 4 Range 0-10

Each test specimen had an unattached backing of 4.5mm thick fibre reinforced cement board.
TEST REPORT

Client: BASF New Zealand Limited
Level 4
4 Leonard Isitt Drive
Auckland Airport Auckland 2022 New Zealand

Test Number: 14-000726
Issue Date: 23/10/2014
Print Date: 23/10/2014

Each test specimen was restrained on the exposed face by a layer of galvanised welded square
mesh made from wire of nominal diameter 0.8mm and nominal spacing 12mm in both directions
and the assembly clamped in four places.

Specimens tended to flash before ignition. Ignition was based on the occurrence of a single flash
of flame which lasted longer than 10 seconds.

The specimens melted and flowed away from the area of maximum heat during the test. Due to
this phenomena it should be recognised that this test result may not be a true indication of the
product's fire hazard properties.

These results only apply to the specimen mounted, as described in this report. The result of this
fire test may be used to directly assess fire hazard, but it should be recognised that a single test
method will not provide a full assessment of fire hazard under all fire conditions.
TEST REPORT

Client: BASF New Zealand Limited
Level 4
4 Leonard Isitt Drive
Auckland Airport Auckland 2022 New Zealand

Test Number: 14-000727
Issue Date: 23/10/2014
Print Date: 23/10/2014

Sample Description
Clients Ref: "Styropor F495E"
Rigid Foam
Colour: White
End Use: Insulation
Nominal Composition: Polystyrene
Nominal Mass per Unit Area/Density: Approximate Density: 26.7kg/m³
Nominal Thickness: 50mm

AS/NZS 1530.3-1999
Methods for Fire Tests on Building Materials, Components and Structures Part 3:
Simultaneous Determination of Ignitability, Flame Propagation, Heat Release and Smoke Release

Face tested: Face
Date tested: 14/10/2014

<table>
<thead>
<tr>
<th>Standard Error</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignition time</td>
<td>0.28</td>
</tr>
<tr>
<td>Flame propagation time</td>
<td>Nil</td>
</tr>
<tr>
<td>Heat release integral</td>
<td>3.1</td>
</tr>
<tr>
<td>Smoke release, log d</td>
<td>0.0843</td>
</tr>
<tr>
<td>Optical density, d</td>
<td></td>
</tr>
</tbody>
</table>

Number of specimens ignited: 6
Number of specimens tested: 6

Regulatory Indices:
Ignitability Index: 9 Range 6-20
Spread of Flame Index: 0 Range 6-10
Heat Evolved Index: 2 Range 6-10
Smoke Developed Index: 4 Range 6-10
TEST REPORT

Client: BASF New Zealand Limited
Level 4
4 Leonard Isitt Drive
Auckland Airport Auckland 2022 New Zealand

Test Number: 14-000727
Issue Date: 23/10/2014
Print Date: 23/10/2014

These results only apply to the specimen mounted, as described in this report. The result of this fire test may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions.

Each test specimen had an unattached backing of 4.5mm thick fibre reinforced cement board.

Each test specimen was restrained on the exposed face by a layer of galvanised welded square mesh made from wire of nominal diameter 0.8mm and nominal spacing 12mm in both directions and the assembly clamped in four places.

Specimens tended to flash before ignition. Ignition was based on the occurrence of a single flash of flame which lasted longer than 10 seconds.

The specimens melted and flowed away from the area of maximum heat during the test. Due to this phenomena it should be recognised that this test result may not be a true indication of the product's fire hazard properties.
TEST REPORT

Client: BASF New Zealand Limited
Level 4
4 Leonard Isitt Drive
Auckland Airport Auckland 2022 New Zealand

Test Number: 14-000728
Issue Date: 23/10/2014
Print Date: 23/10/2014

Sample Description
Clients Ref: "Neopor F5300"
Rigid foam
Colour: Grey
End Use: Insulation
Nominal Mass per Unit Area/Density: Approx. 23.7kg/m³
Nominal Thickness: 50mm

AS/NZS 1530.3-1999
Methods for Fire Tests on Building Materials, Components and Structures Part 3:
Simultaneous Determination of Ignitability, Flame Propagation, Heat Release and Smoke Release

Face tested: Face
Date tested: 15/10/2014

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignition time</td>
<td>0.37 sec</td>
</tr>
<tr>
<td>Flame propagation time</td>
<td>Nil sec</td>
</tr>
<tr>
<td>Heat release integral</td>
<td>1.0</td>
</tr>
<tr>
<td>Smoke release, log d</td>
<td>0.0334</td>
</tr>
<tr>
<td>Optical density, d</td>
<td>0.1784 / metre</td>
</tr>
<tr>
<td>Standard Error</td>
<td>Mean</td>
</tr>
<tr>
<td>min</td>
<td>11.07 min</td>
</tr>
<tr>
<td>61.1 KJ/m²</td>
<td></td>
</tr>
</tbody>
</table>

Number of specimens ignited: 6
Number of specimens tested: 6

Regulatory Indices:
- Ignitability Index: 9 Range 0-20
- Spread of Flame Index: 0 Range 0-10
- Heat Evolved Index: 2 Range 0-10
- Smoke Developed Index: 5 Range 0-10
TEST REPORT

Client: BASF New Zealand Limited
Level 4
4 Leonard Isitt Drive
Auckland Airport Auckland 2022 New Zealand

Test Number: 14-000728
Issue Date: 23/10/2014
Print Date: 23/10/2014

These results only apply to the specimen mounted, as described in this report. The result of this fire test may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions.

Each test specimen had an unattached backing of 4.5mm thick fibre reinforced cement board.

Each test specimen was restrained on the exposed face by a layer of galvanised welded square mesh made from wire of nominal diameter 0.8mm and nominal spacing 12mm in both directions and the assembly clamped in four places.

Specimens tended to flash before ignition. Ignition was based on the occurrence of a single flash of flame which lasted longer than 10 seconds.

The specimens melted and flowed away from the area of maximum heat during the test. Due to this phenomena it should be recognised that this test result may not be a true indication of the product's fire hazard properties.