**Main characteristics (technical specifications)**

Ready-to-use product for fire protection, fire-retarding 6 hours under ISO curve. To stabilise a concrete wall or a steel structure, development of a complex behaving as a thermal shield consisting of a 40 mm-thick coat reinforced with an octagonal wire mesh with or without 3 mm-CYCETANCHFLEX (CEF) water repellent finishing.

Available in several versions: normal version 6.1, fibered version 6.2 including ceramic fibres, injectable version 6 A et version 6 HCM (tested under HCM by a private lab).

**Can be washed:** ☐ Low/medium/high pressure  ☑ Can be painted: ☐

**Information on the composition**

Mineral composition with hydraulic reaction, asbestos free, including high performance cements and additives.

**Fire Test reports (cross the relevant boxes)**

<table>
<thead>
<tr>
<th>Test</th>
<th>ISO (1050°C 2h 1160°C 4h)</th>
<th>HC (1100°C, ref. EC1.1.2)</th>
<th>HCM (1300°C, HC=1300/1100)</th>
<th>RABT/ZTV (Germany) (1200°C)</th>
<th>RWS (1350°C)</th>
<th>Others:</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

Characteristics of the tested samples, report number and possible comments:

- Test conducted by CSTB in 1997 of a 40 mm thick protection on a 25 cm concrete support during 6 hours for both versions 6.1 et 6.2 (test reports No.43349/B)
- Test conducted by CERIB in 2003 of 3 versions of CYC Feu 6 protection during 7 hours (report No.03 DPO 292)
  - version 6.1 application by spraying
  - version 6A pourable and injectable for prefabrication
  - version 6 HCM for resistance beyond 3 hours

**Application procedures**

On soiling free supports. For concrete supports, pre-waterproofing with CYC ETANCH FLEX resin of all peculiar points (cracks, joints, chips…). Installation of a steel wire mesh (50 mm / 0.8mm meshes) and steel dowels.

Mortar proportioning 12 l water per 20 kg bag. Mortar sprayed by Putzmeister pump in two lengths (maxi 25mm) for 40 mm coat. Installation of joints to divide into 15 m² panels with ceramic or mineral fibres flange.

For weather affected parts a waterproofing type CYC ETANCH FLEX standard or SW series should be provided.

Coat surface finished with INOX float.

**Present application field**

Fire protection of structures: hydrocarbide storage units, chemicals, petrochemicals, car-parks, computer data storage units
### Possible use in tunnels

Tunnel vaults and sidewalls, plates and segments

### Civil engineering works references

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### Physical and thermal data

**Reaction to fire**
*(French/European classification): 0*

**Main thermal data: (at 20°C and possibly variation with temperature):**

<table>
<thead>
<tr>
<th>T (°C)</th>
<th>Thermal conductivity λ (W.m⁻¹.K⁻¹)</th>
<th>Specific heat c (J. kg⁻¹.K⁻¹)</th>
<th>Density ρ (kg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>0.26 0.33</td>
<td>880 935</td>
<td>850 993</td>
</tr>
<tr>
<td>100</td>
<td>0.27 0.32</td>
<td>1010 1001</td>
<td>839 980</td>
</tr>
<tr>
<td>200</td>
<td>0.26 0.34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>400</td>
<td>0.23 0.29</td>
<td>875 833</td>
<td>823 955</td>
</tr>
<tr>
<td>800</td>
<td>0.20 0.28</td>
<td>835 864+/-35</td>
<td>752 905 +/-1 4</td>
</tr>
</tbody>
</table>

- **Resulting emissivity (adimensionnal):** $\varepsilon_{\text{res}} = \ldots$

### Other thermal data:

**Reflection coefficient (adimensionnal):**

or

**Absorption coefficient (adimensionnal):**

### Main mechanical data:

**E modulus (Mpa) =**

**Compressive strength (Mpa) =**

### Complementary data:

**Porosity:**

**Shore hardness:**

**PH:**

### Durability

### Product and company identification/Commercial name/Applicators

CESA (Compagnie d’Entreprises de Services et d’Applications)
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cycanac@infonie.fr

### Documentation/References

Catalogue of technical products CESA (Dec 02)

www.cetu.developpement-durable.gouv.fr

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