esa-one paint 1A10 is a chemical specialty line based on “all in one additive” technology. It combines the functions of different additives for an easy and rapid production of waterborne paints and paste systems. esa-one paint 1A10 speeds up the production process because it allows the reduction of the number of components in the formulation. esa-one paint 1A10 is easy dispersible in water without any lumps formation; it dissolves without any addition of alkali. esa-one paint 1A10, due to its particular physical form, is easy to handle and does not develop any undesiderable dust.

**Chemical-physical characteristics**

- **Chemical description:** anionic etherified macropolymers
- **Appearance:** ivory pellets
- **Moisture:** 10% max
- **Bulk density:** 0.6 - 0.8 g/ml
- **Solubility:** complete in hot and cold water
- **Brookfield RVT viscosity:** 2000 - 4500 mPa*s (6% w/w water sol., 20°C, 20 rpm)
- **Incompatibility:** free bivalent ions

**Orientative waterborne paint formulation:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>28</td>
</tr>
<tr>
<td>Biocide</td>
<td>0.2</td>
</tr>
<tr>
<td>esa-one paint 1A10</td>
<td>1 - 2</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>1</td>
</tr>
<tr>
<td>Amorphous calcium carbonate</td>
<td>50</td>
</tr>
<tr>
<td>Crystalline calcium carbonate</td>
<td>15</td>
</tr>
<tr>
<td>Alkali agent*</td>
<td>0.2</td>
</tr>
<tr>
<td>Latex emulsion</td>
<td>4.5</td>
</tr>
</tbody>
</table>

*alkali agent only if necessary to adjust pH close 9

**Paint characteristics:**

- **PVC:** 92%
- **Density:** 1.69 - 1.72 g/ml
- **esa-one paint 1A10**
  - 1.1 %: 1.7 %
  - 1.5 %: 1.5 %
- **Brookfield viscosity**
  - 20 rpm; 20°C (mPa*s): 12000 - 24000
- **Stormer viscosity**
  - 20°C (KU): 116 - 136

**Packing and storage**

esa-one paint 1A10 is available in 25kg multi-layer paper bags with polyethylene internal layer. The product is hygroscopic and should be stored in its original packing in cool and dry conditions. If stored in these conditions esa-one paint 1A10 does not change its properties in the period of 12 months from the date of production.

High PVC water-based paints: 0.5 - 2%

The dosages are referred to the total formulation

We suggest a preliminary test in the lab to find the optimal dosage of esa-one paint 1A10 for each system considered.