Magnafloc® 1011

Anionic flocculant

Description
Magnafloc 1011 is a very high molecular weight anionic polyacrylamide flocculant supplied as a free flowing granular powder.

Principal uses
Magnafloc 1011 has found application in a wide variety of mineral processing operations including the following:

1. Base metal sulphide and oxide concentrates thickening and filtration
2. Sedimentation of coal tailings
3. Sedimentation of coal fines
4. Filtration of coal fines
5. Deep cone thickening of coal fines
6. Sedimentation of fine sands and clays
7. Iron ore tailing
8. Clarification of acid leach pulp (copper)
9. Sulphur extraction
10. Hard Rock Drilling Fluid

Dosage depends upon the application but normally lies in the range 2 – 200 g/tonne of dry substrate flocculated.

Typical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical form</td>
<td>White to off-white granular powder</td>
</tr>
<tr>
<td>Particle size</td>
<td>98% &lt; 1000 μm</td>
</tr>
<tr>
<td>Bulk density</td>
<td>Approx. 0.75 g/cm³</td>
</tr>
<tr>
<td>pH of 1% solution</td>
<td>Approx. 6.0</td>
</tr>
<tr>
<td>Viscosity at 25 °C</td>
<td>See graph and table</td>
</tr>
</tbody>
</table>
Application

Recommended solution concentrations:

- Stock solution: 0.25–0.5 % max.
- Feed solution: 0.025–0.1 % max.

Storage & Shelf life

Magnafloc 1011 is at least stable for four years from date of manufacture in its unopened original packaging stored in a cool and dry place.

Stock solution: 1–2 days

Details on preparation and application can be obtained from a BASF representative.

Solution viscosity data
(Fann viscometer – 25 °C – solvent – deionised water)

<table>
<thead>
<tr>
<th>Magnafloc 1011 concentration (%)</th>
<th>Shear rate (sec⁻¹)</th>
<th>5.11</th>
<th>10.22</th>
<th>170</th>
<th>340</th>
<th>511</th>
<th>1022</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Approx. Viscosity (cP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>1997</td>
<td>1325</td>
<td>192</td>
<td>105</td>
<td>75</td>
<td>65</td>
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</tr>
<tr>
<td>0.5</td>
<td>1248</td>
<td>725</td>
<td>102</td>
<td>75</td>
<td>67</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>0.25</td>
<td>606</td>
<td>350</td>
<td>48</td>
<td>41</td>
<td>37</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>0.10</td>
<td>300</td>
<td>150</td>
<td>27</td>
<td>20</td>
<td>17</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

Shipping & Handling

Magnafloc 1011 is available in 25 kg bags and big bags.

Corrosivity towards most standard materials of construction is low, but aluminium and galvanised equipment should be avoided.

Technical service

Advice and assistance in the running of laboratory and plant tests to select the correct product and determine the best application can be provided by representatives of BASF, who are experienced in mineral processing applications.

Health & Safety

Please refer to the Safety Data Sheet for detailed information concerning product’s hazards and appropriate protective measures in the workplace.
Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

September 2015