AGRANA AT A GLANCE

**BRANCHES**
- STARCH – FRUIT – SUGAR

**EMPLOYEES**
- More than 9,500

**KEY MATERIALS**
- Bio-based raw materials: maize, wheat & potato

**KEY PRODUCTS**
- For the plastic industry:
  - AGENACOMP® – Home compostable compounds for film blowing.
  - AMITROPLAST® – Specialised thermoplastic starch: The perfect ingredient for compounds for film blowing, injection moulding and 3D printing.

**AGRANA – The natural upgrade**
adds value to agricultural commodities to produce top quality foodstuffs and numerous industrial upstream products. AGRANA is today the leading sugar company in Central and Eastern Europe as well as being a key producer, in the Starch segment, of special products and bioethanol in Europe.

In addition, AGRANA is the global leader in fruit preparations and a major producer of fruit juice concentrates in Europe. We transform almost 100% of the employed raw material into value-added products using low-emission technologies.

**R & D**
The journey of implementing sustainable solutions to ensure the fulfillment of today’s and future demands is just in its beginnings.

AGRANA employs a significant number of scientists and technicians who conduct applied research and customer oriented product development.

Strengthening sustainable partnerships is our motivation, whereby confidentiality and technical support are guaranteed.
Our expertise in BIOPLASTICS
Starch is an amazing and very versatile material, making it an important base for modern bioplastics. In the production of bioplastics, AGRANA uses its strong and unique expertise in the production and processing of starch and combines this with the knowledge of the needs of the plastics industry.

AGENACOMP® – your compound for film extrusion
Our AGENACOMP is home compostable and contains more than 50 % renewable materials. It allows to extrude films of less than 10 μm by standard film extrusion equipment.

AGENACOMP – properties and applications

BIO-BASED
AGENACOMP compounds are available with a bio-based content of more than 50 %.

FILM
A 20 μm film typically results in an extensibility of 300 % and a tensile strength of 35 MPa.

NO SMOKE
The new technology of AGENACOMP significantly reduces the development of smoke during film blowing.

STRETCHING
Stretching increases the tensile strength, whereby values in a range of 60 MPa are accomplished (depending on the applied draw-ratio).

BIO-DEGRADATION & COMPOSTING

HOME-COMPOST CONDITIONS (28 °C AND LESS)

<table>
<thead>
<tr>
<th>15 μm film AGENACOMP®</th>
<th>start</th>
<th>after 2 weeks</th>
<th>after 4 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density (g/cm³)</td>
<td>approx. 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Particle size (mm)</td>
<td>approx. 4</td>
<td></td>
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<tr>
<td>Melt Volume Rate MVR (190 °C, 2.16 kg) (cm³/10 min)</td>
<td>approx. 2</td>
<td></td>
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</tr>
</tbody>
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CERTIFICATIONS
AGENACOMP is certified according to EN 13432.

Based on EN13432: Degradation of 90% of the starting material into CO₂, water and minerals within 6 months at industrial compost conditions (60°C)

Degradation of 90% of the starting material into CO₂, water and minerals within 12 months at home composting conditions (30°C).

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AGRANA.COM
THE NATURAL UPGRADE