

# BIOPLASTIC COMPOUNDS

Made in Austria.

SUSTAINABLE - UP TO 50 % RENEWABLE RESSOURCES. HOME-COMPOSTABLE – NO MICROPLASTIC RESIDUES.

### AGRANA AT A GLANCE

AGEN

HOME-COMPOSTABLE

NO MICROPLASTIC RESIDUES

#### 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<sup>®</sup> – Home compost-
- able compounds for film blowing.
- AMITROPLAST<sup>®</sup> 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.

# AGENACOMP<sup>®</sup> – properties and applications

#### 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.

Carrier bags
Fruit and vegetable bags
Waste bags

Non woven fibers

#### 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  $\mu$ m by standard film extrusion equipment.

#### OUR STARCH

#### OUR AMITROPLAST

thermoplastic starch

Our specialized

The way to your

- Renewable and regional raw material
- Non-genetically modified

### modified unique bio-polymer compound

## AGENACOMP

#### BIO-BASED

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

#### FILM

A 20  $\mu$ m 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**

#### OUR AGENACOMP

- Combination of AMITROPLAST<sup>®</sup> with other bio-polymers
- Made in Austria

#### YOUR FILM

- Biodegradable
- Home-compostable
- Bio-based

Density (g/cm³)	approx. 3	
Particle size (mm)	approx. 4	
Melt Volume Rate MVR (190 °C, 2.16 kg) (cm³/10 min)	approx. 2	



HOME-COMPOST CONDITIONS (28 °C AND LESS)				
	start	after 2 weeks	after 4 weeks	
15 μm film AGENACOMP®				
<b>CERTIFICATIONS</b> AGENACOMP is certified according to EN 13432.	OK compost	CK compost OK compost DK compost AUSTRIA HOME S0654	OK biobased	

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 CO<sub>2</sub>, water and minerals within 12 months at home composting conditions (30°C).

- ★ 20 to 40% biobased
- ★★ 40 to 60% biobased
- ★★★ 60 to 80% biobased
- \*\*\*\* 80 to 100% biobased
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